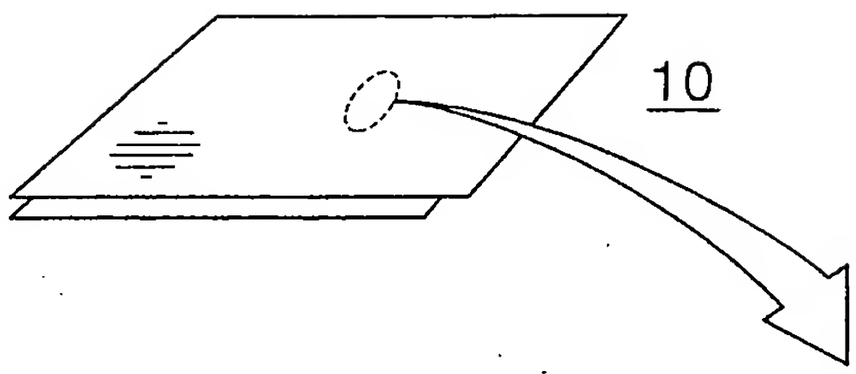
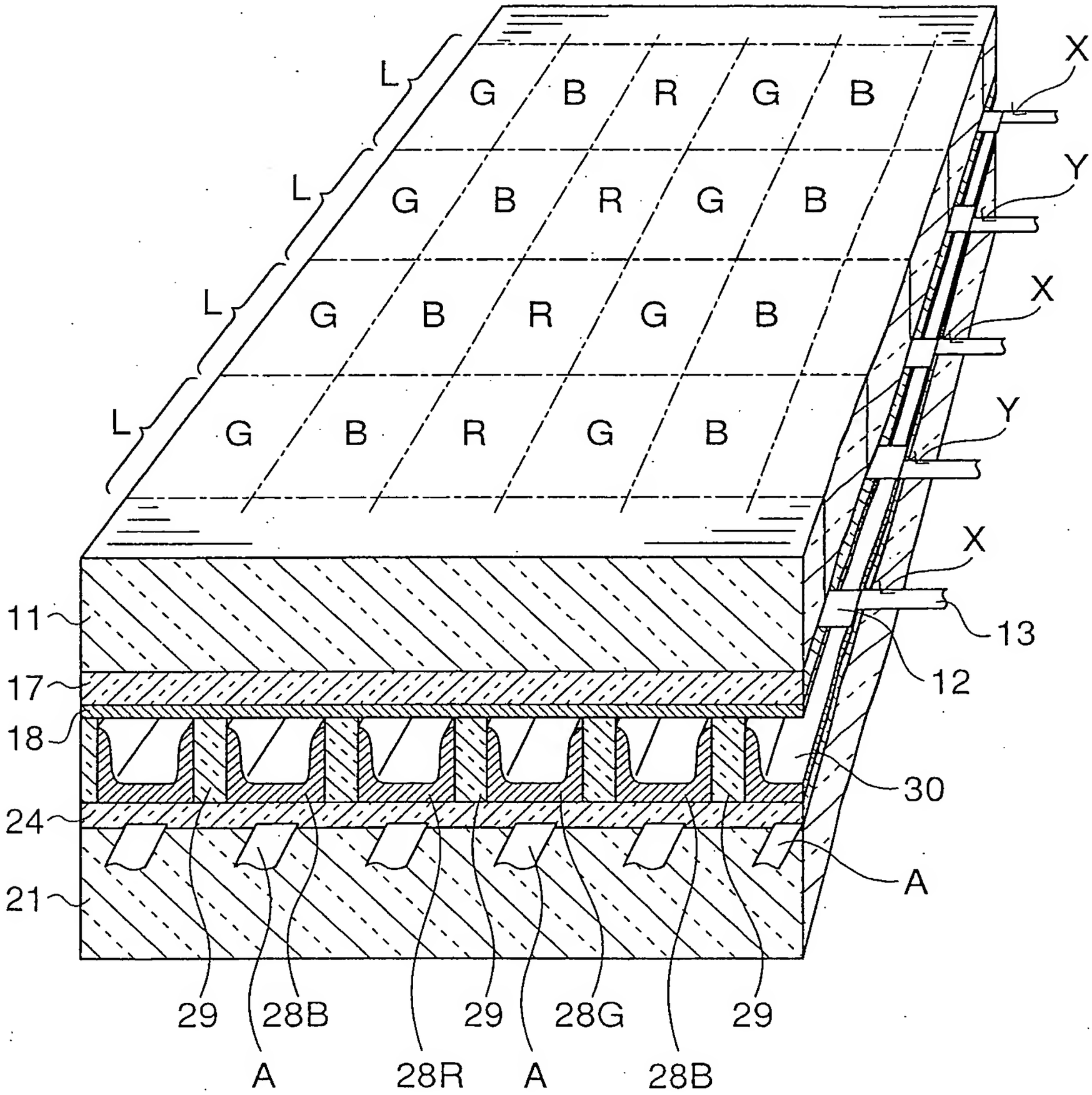
FIG.1





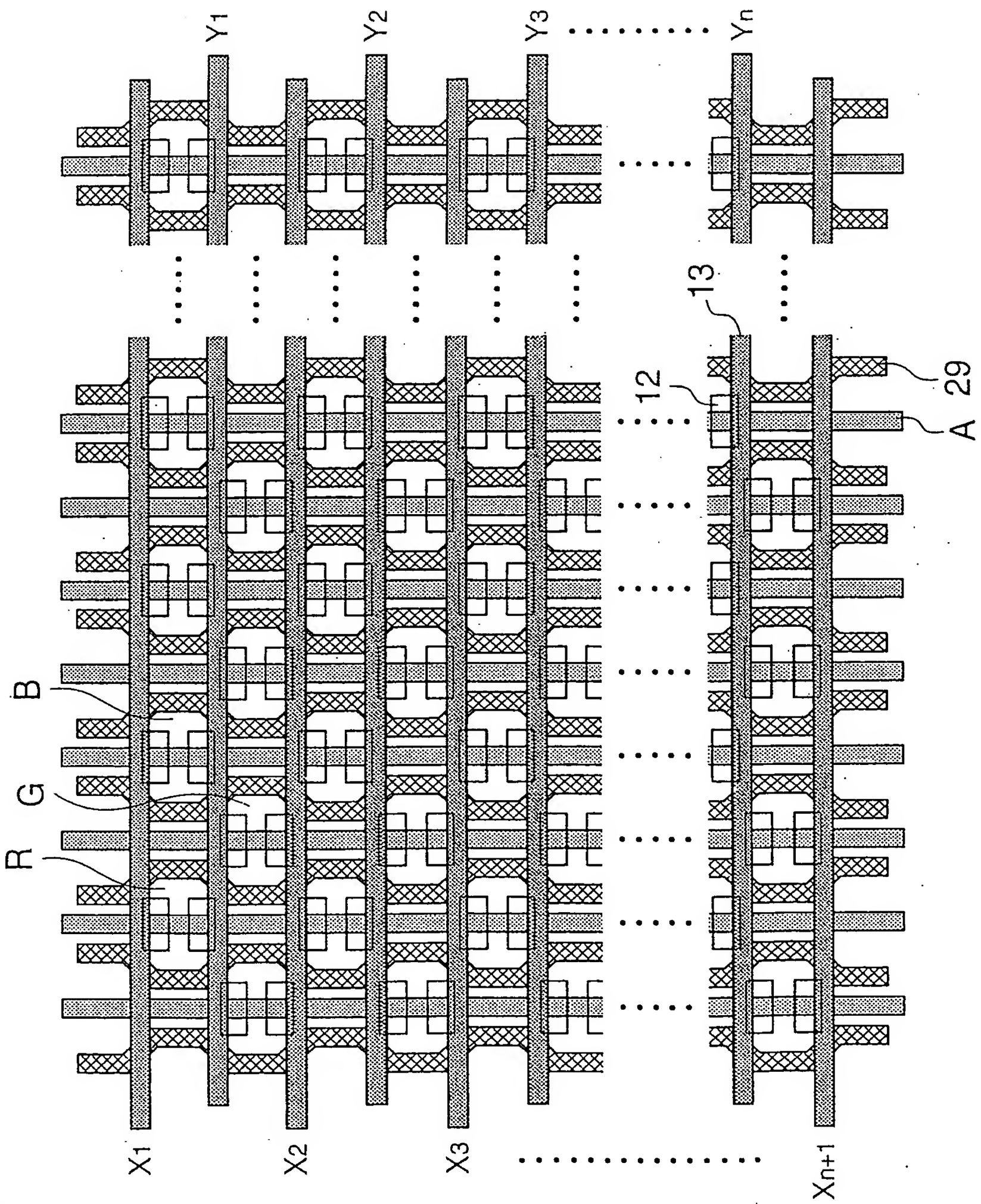


FIG.2

FIG.3

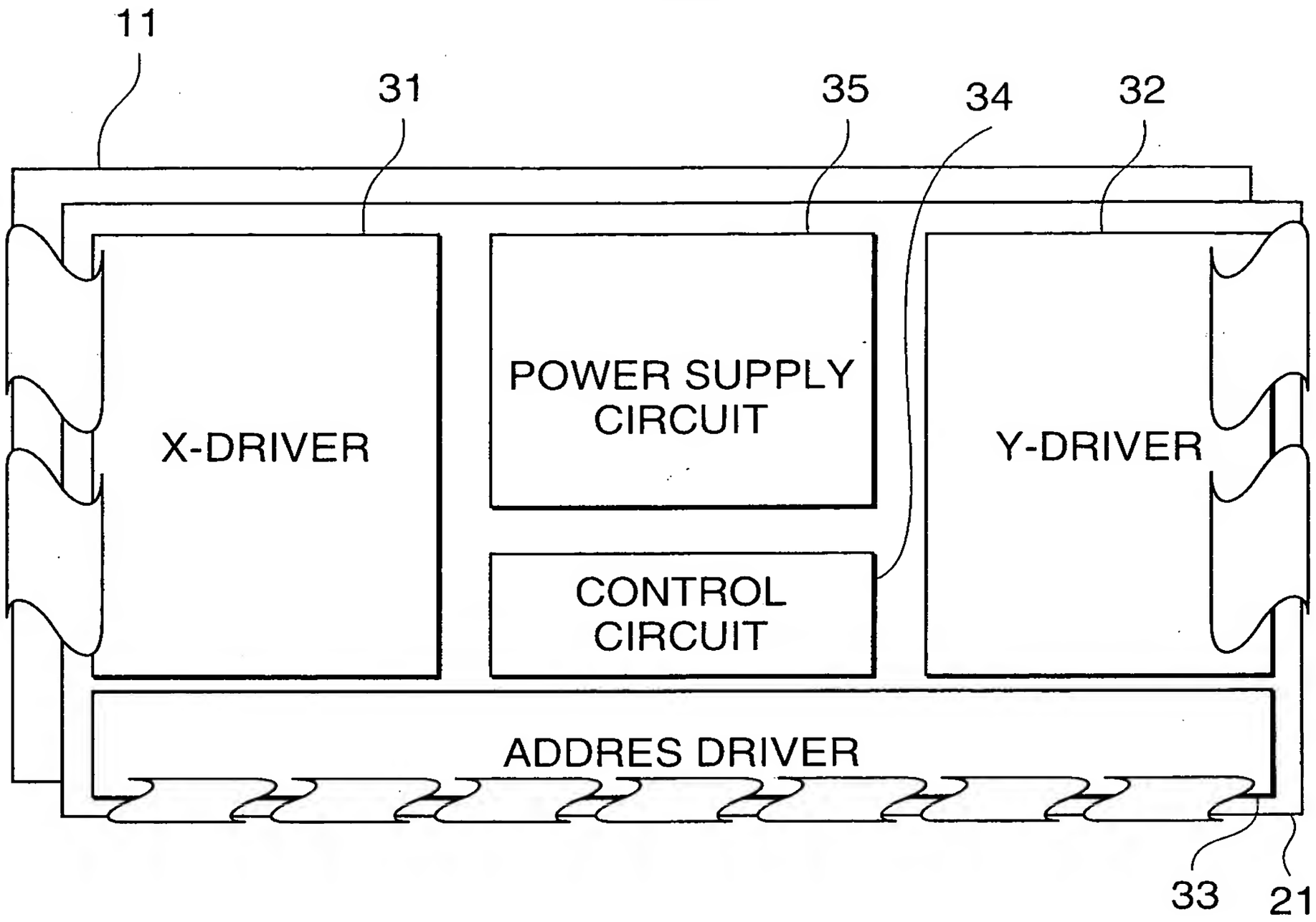

11
31
35
34
32
X-DRIVER
POWER SUPPLY CIRCUIT
Y-DRIVER
CONTROL CIRCUIT
ADDRES DRIVER
33
21

FIG.4

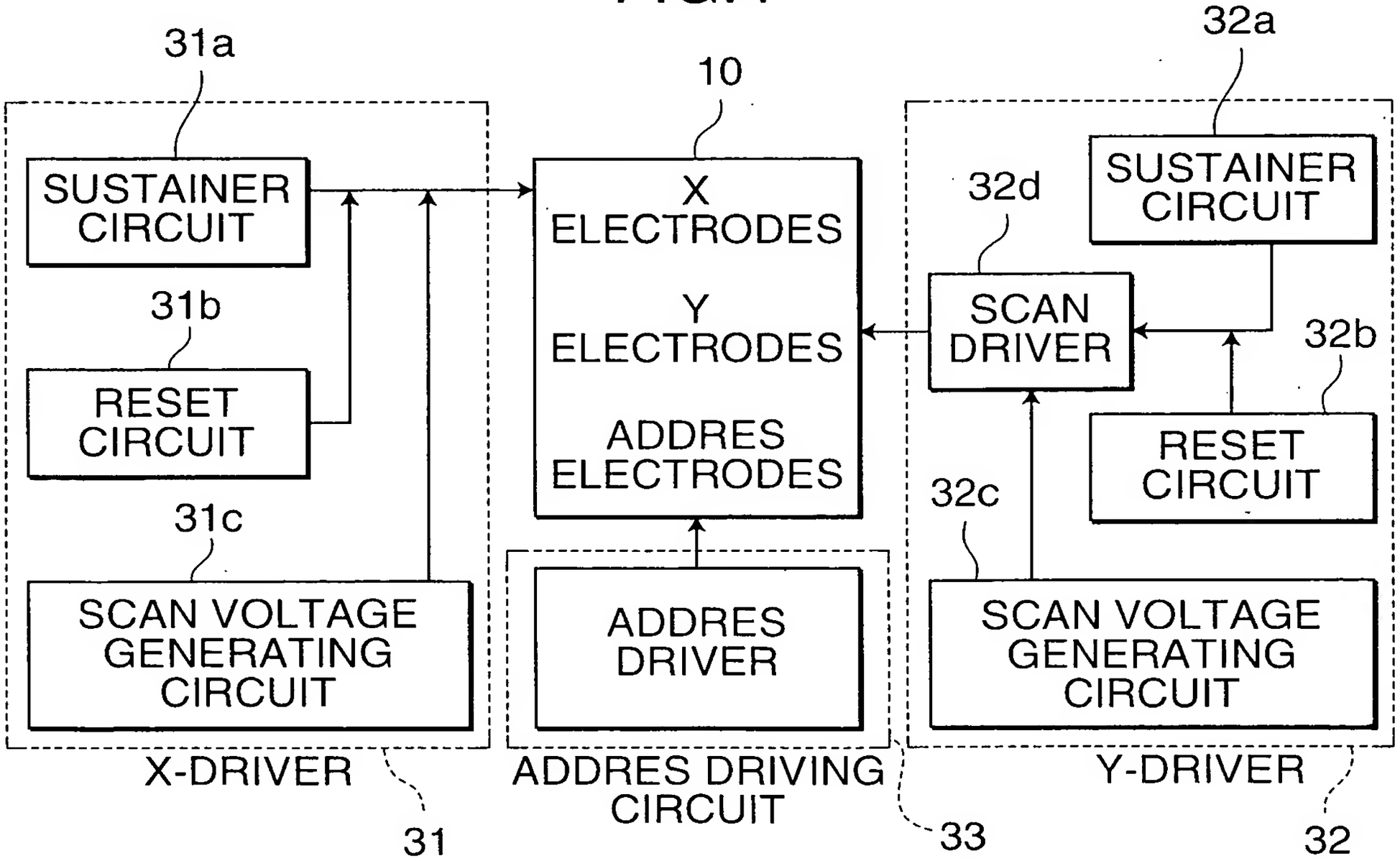

31a
10
32a
SUSTAINER CIRCUIT
X ELECTRODES
Y ELECTRODES
ADDRES ELECTRODES
SUSTAINER CIRCUIT
32d
SCAN DRIVER
31b
RESET CIRCUIT
32b
RESET CIRCUIT
31c
32c
SCAN VOLTAGE GENERATING CIRCUIT
ADDRES DRIVER
SCAN VOLTAGE GENERATING CIRCUIT
X-DRIVER
ADDRES DRIVING CIRCUIT
Y-DRIVER
31
33
32

FIG.5

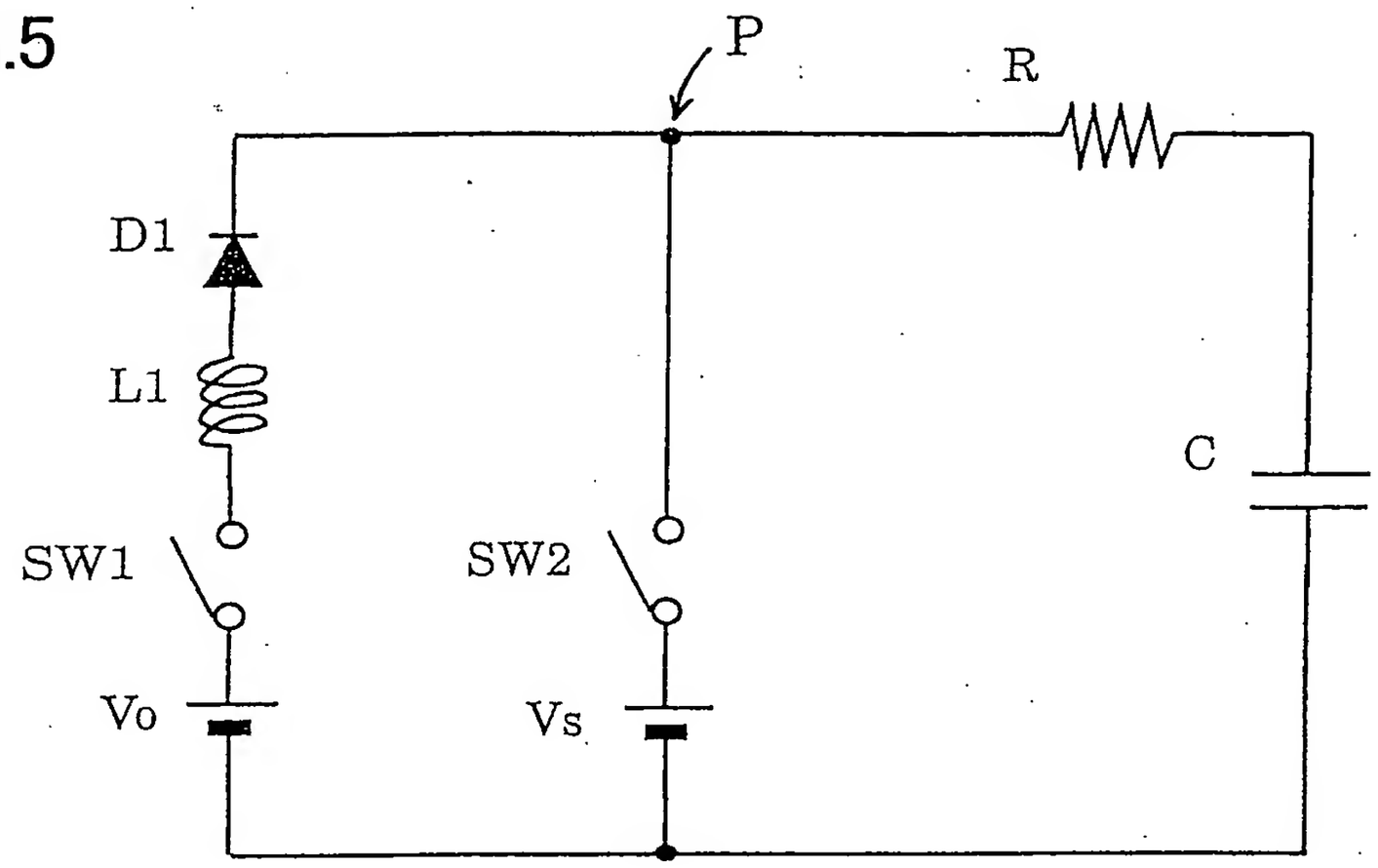

P
R
D1
L1
C
SW1
SW2
Vo
Vs

FIG.6

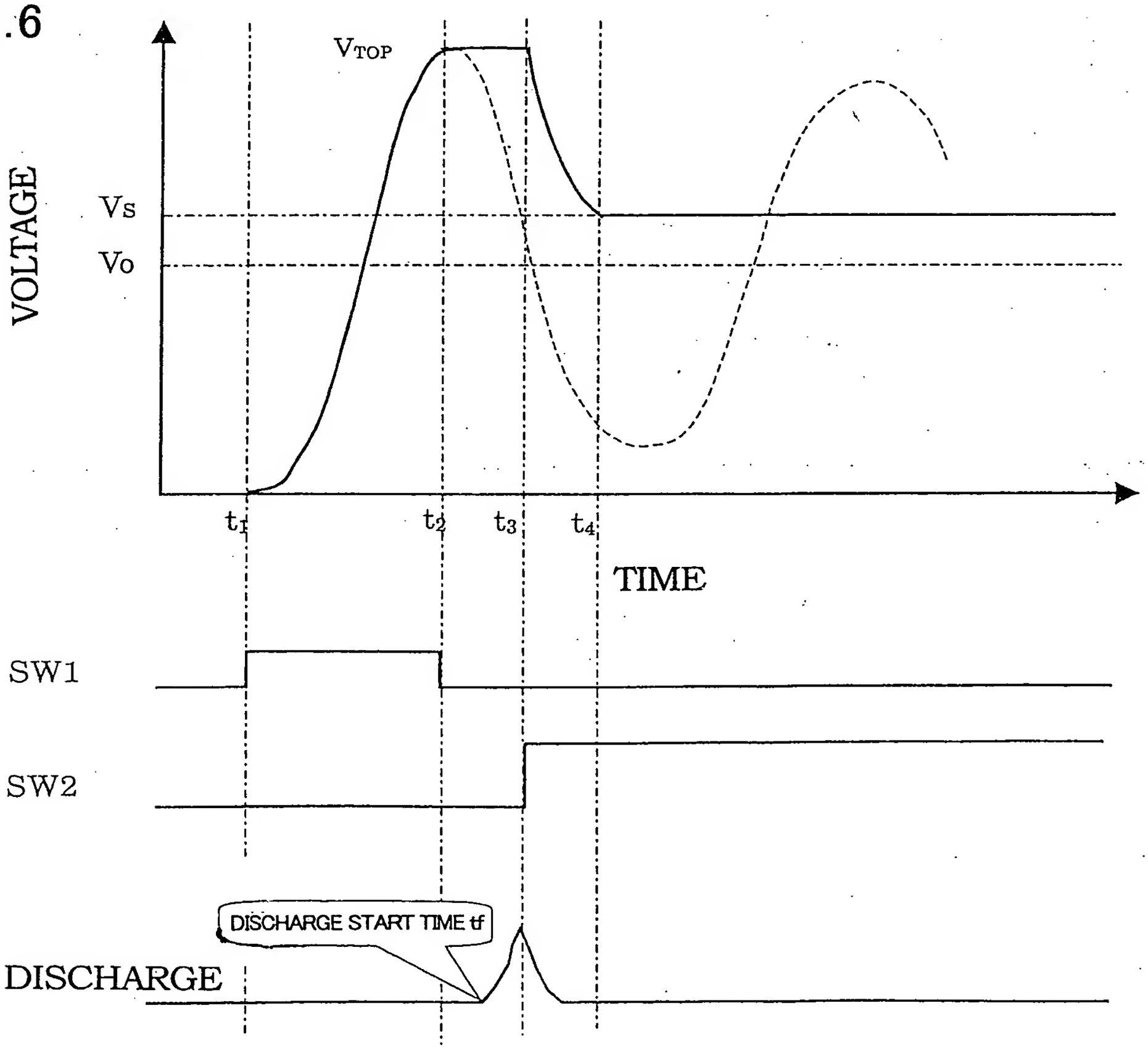
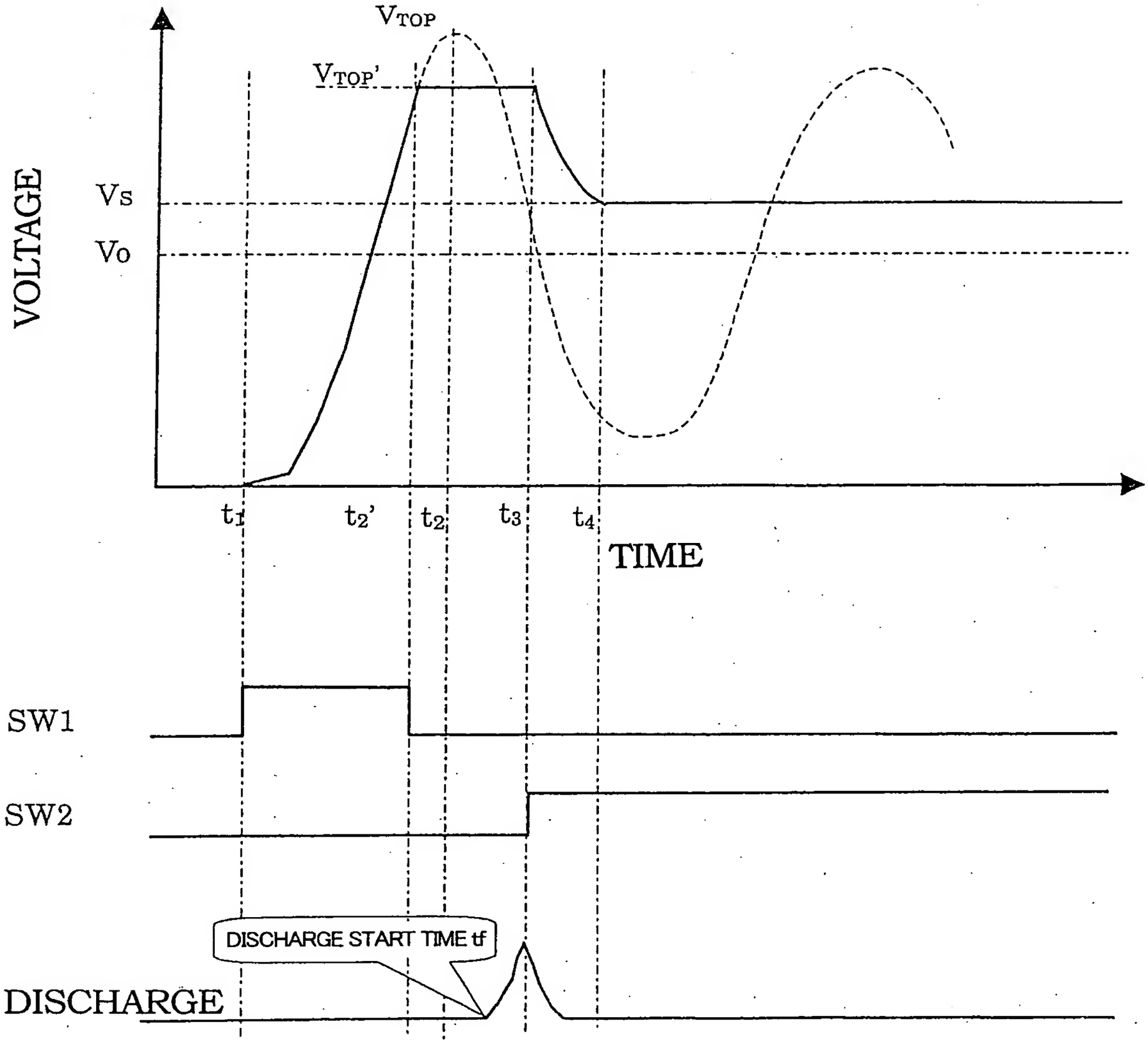

VTOP
VOLTAGE
Vs
Vo
t1
t2
t3
t4
TIME
SW1
SW2
DISCHARGE START TIME tf
DISCHARGE

FIG.7


VTOP
VTOP'
VS
VO
VOLTAGE
t1
t2'
t2
t3
t4
TIME
SW1
SW2
DISCHARGE START TIME tf
DISCHARGE

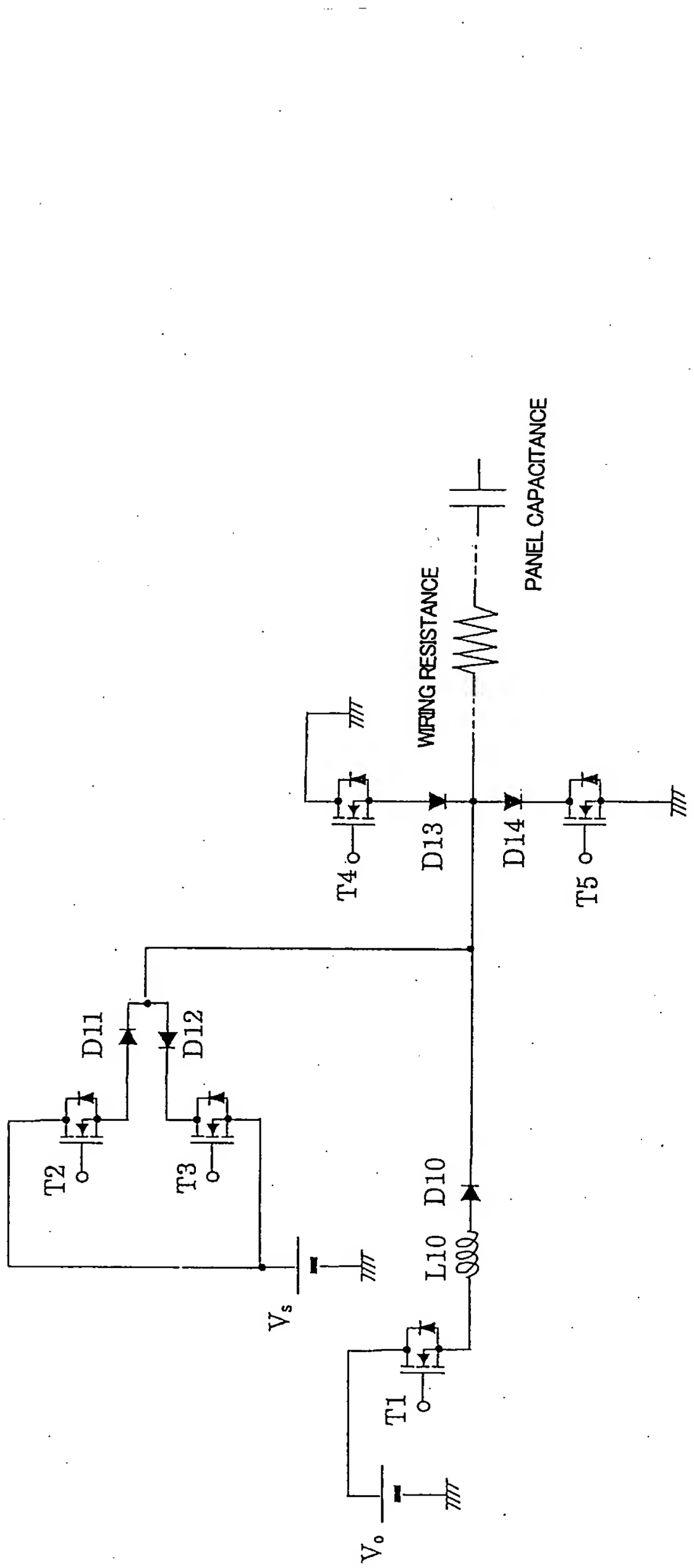

PANEL CAPACITANCE
WIRING RESISTANCE
T4
D13
D14
T5
D11
D12
T2
T3
V_s
L10
D10
T1
V_o

FIG.8

FIG.9

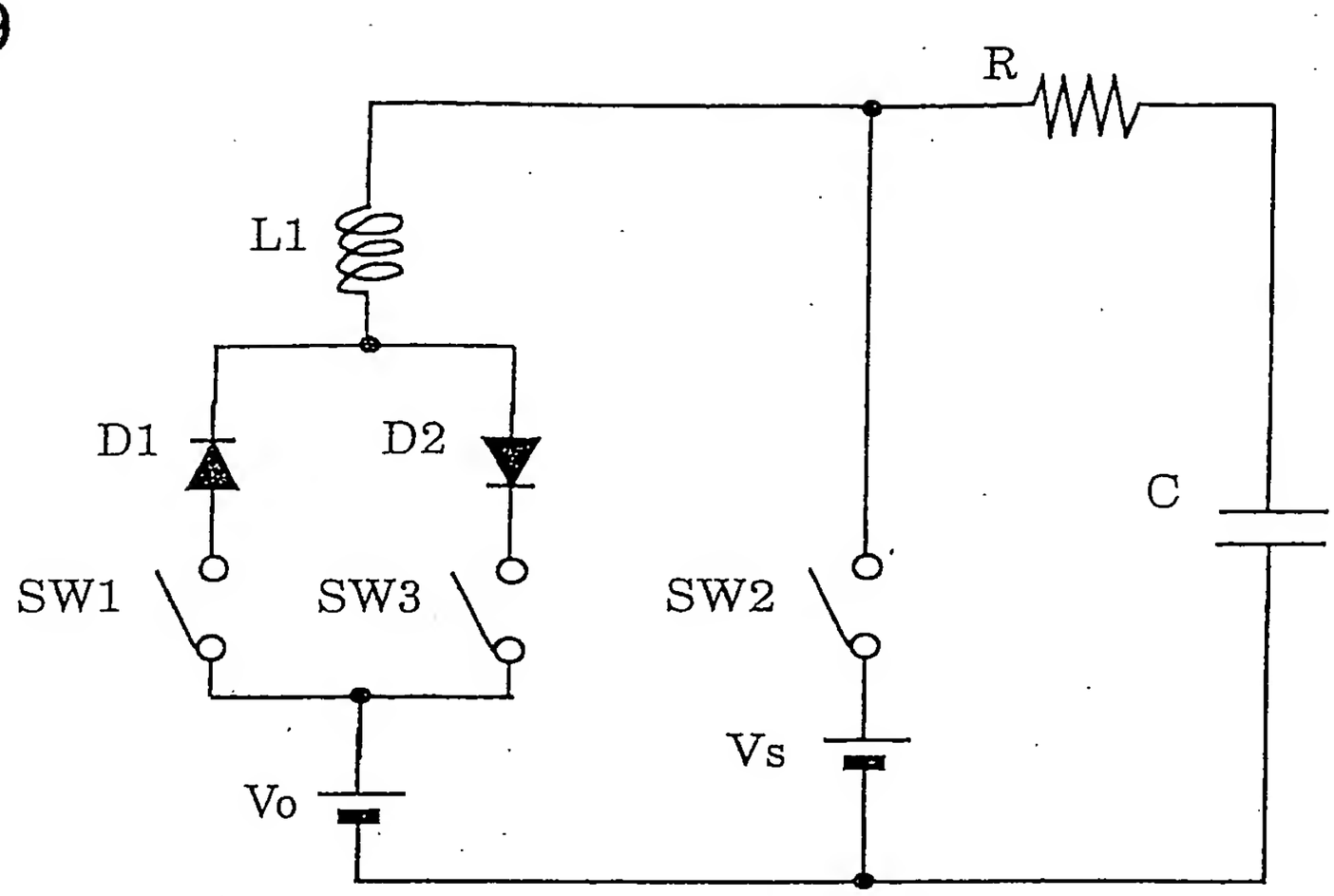
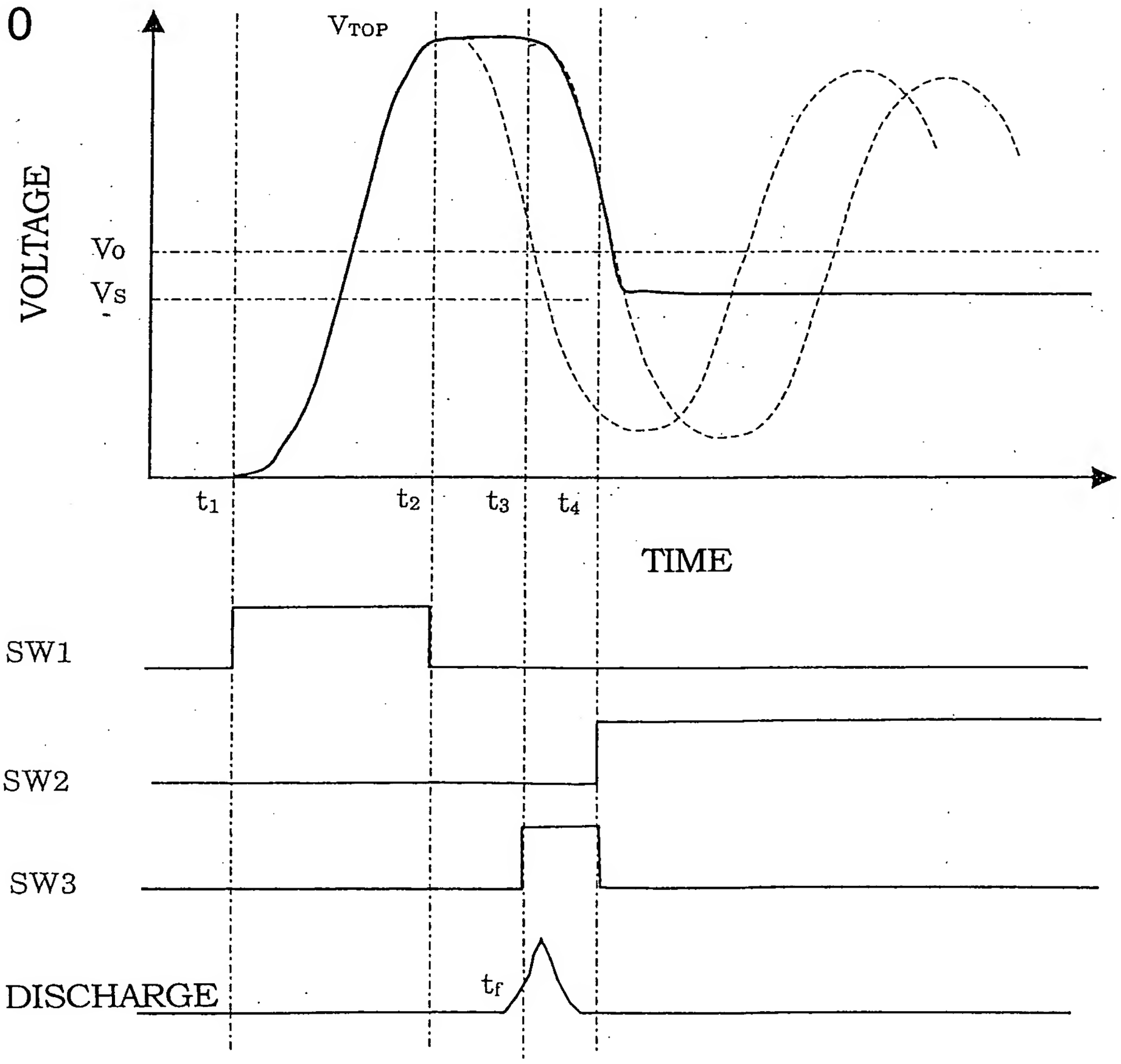

R
L1
D1
D2
C
SW1
SW3
SW2
Vo
Vs

FIG.10


VTOP
VOLTAGE
Vo
Vs
t1
t2
t3
t4
TIME
SW1
SW2
SW3
DISCHARGE
tf

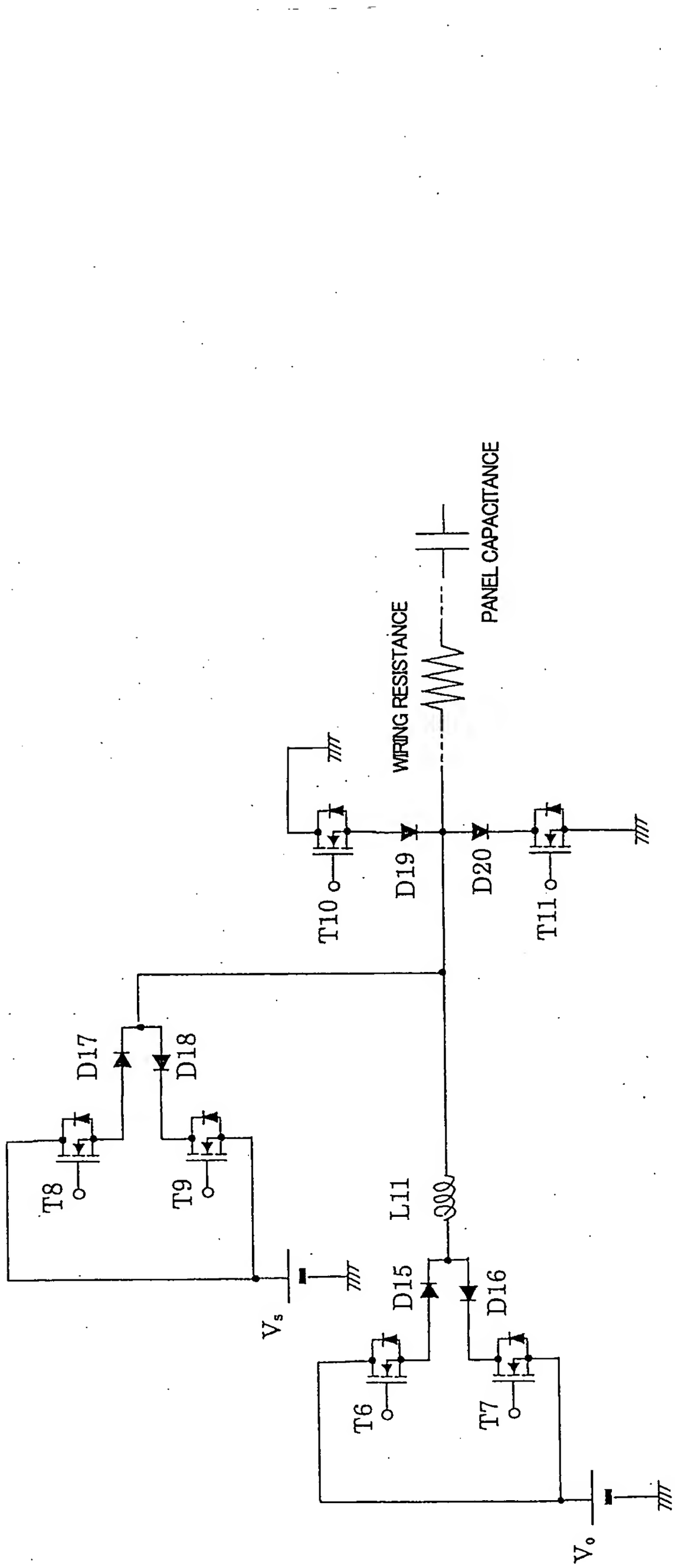

PANEL CAPACITANCE
WIRING RESISTANCE
D19
D20
T10
T11
D17
D18
T8
T9
L11
D15
D16
T6
T7
V_s
V_o

FIG.11

FIG.12

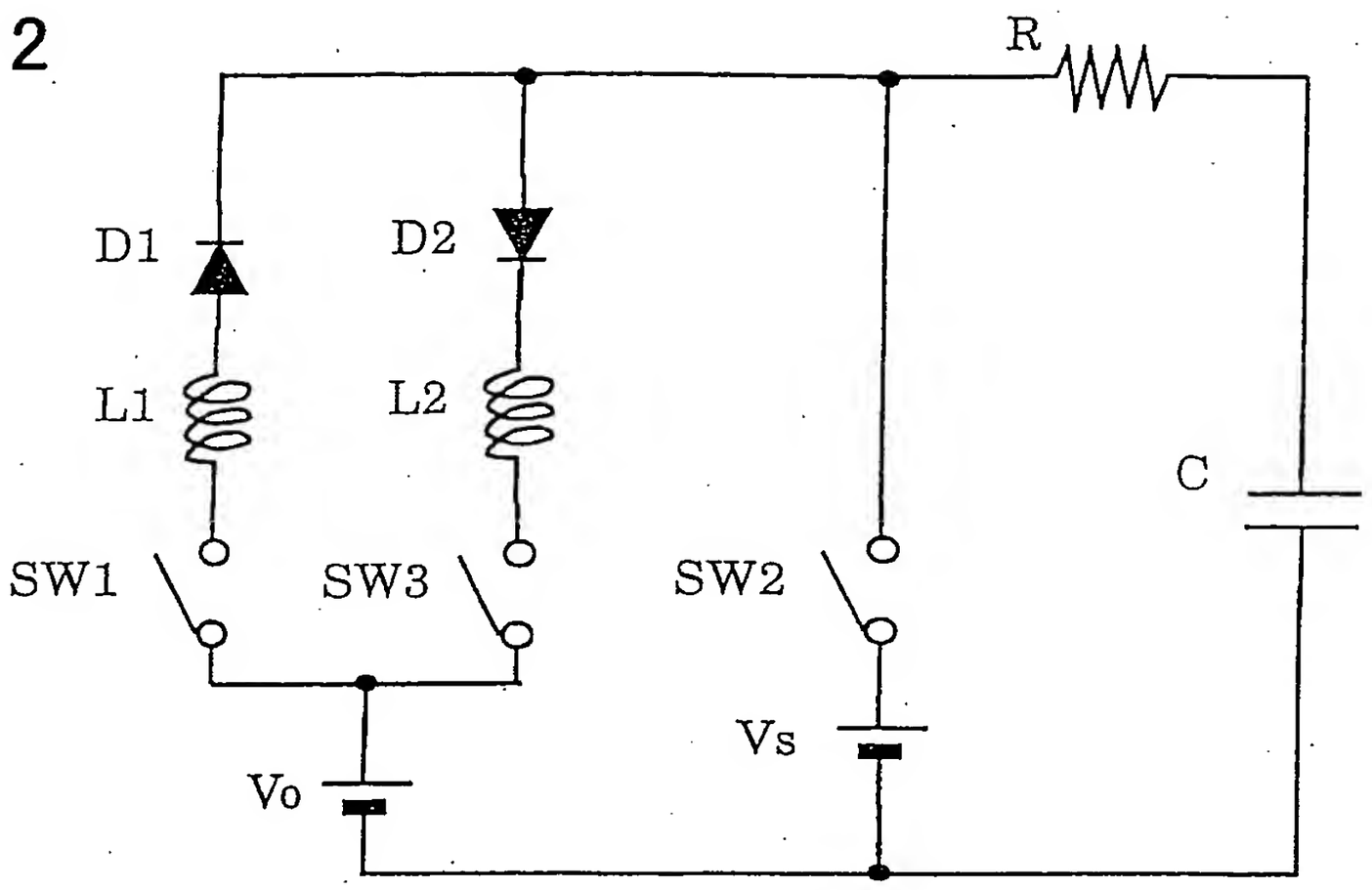
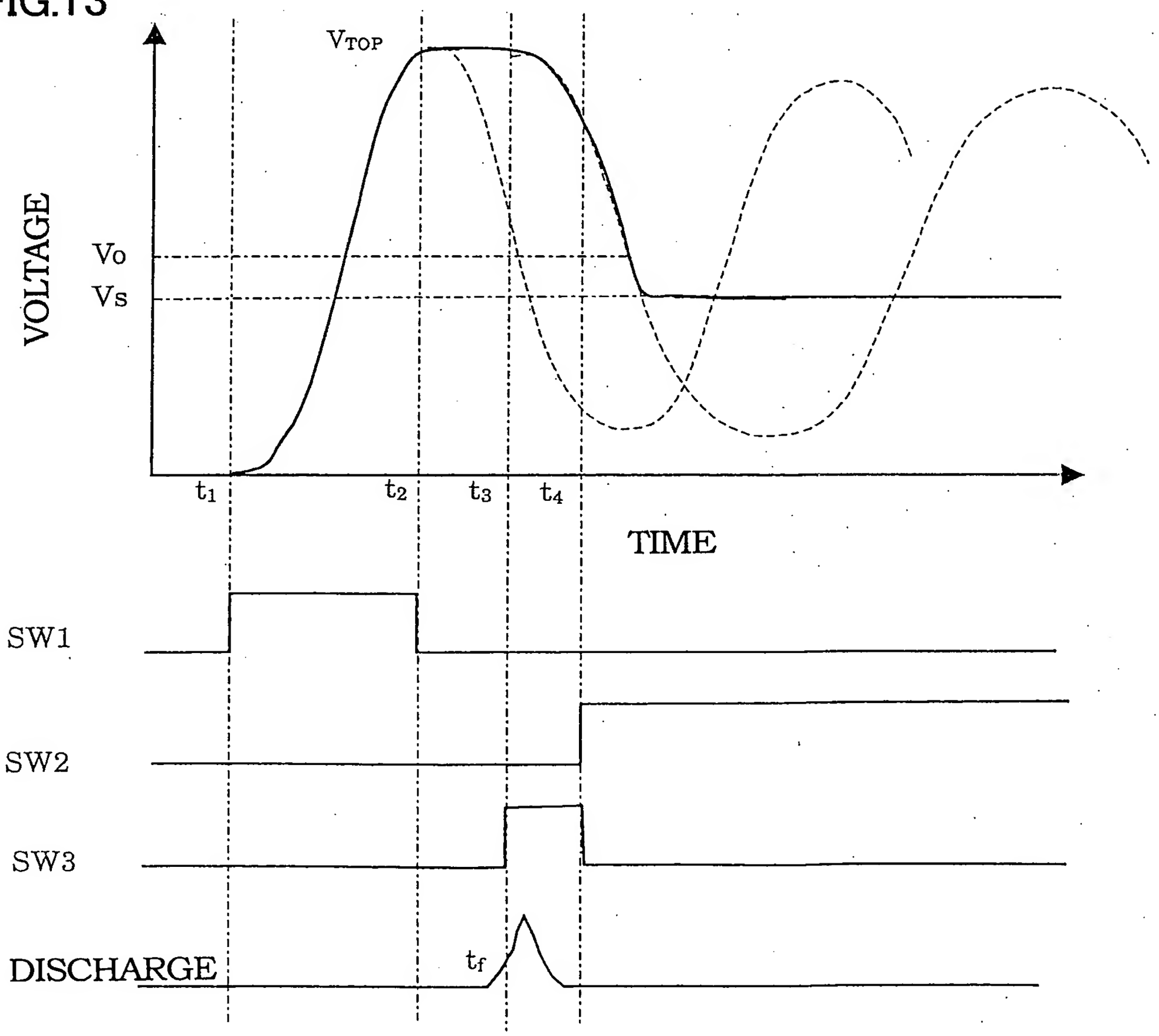

R
D1
D2
L1
L2
C
SW1
SW3
SW2
Vs
Vo

FIG.13


VTOP
VOLTAGE
Vo
Vs
t1
t2
t3
t4
TIME
SW1
SW2
SW3
DISCHARGE
tf

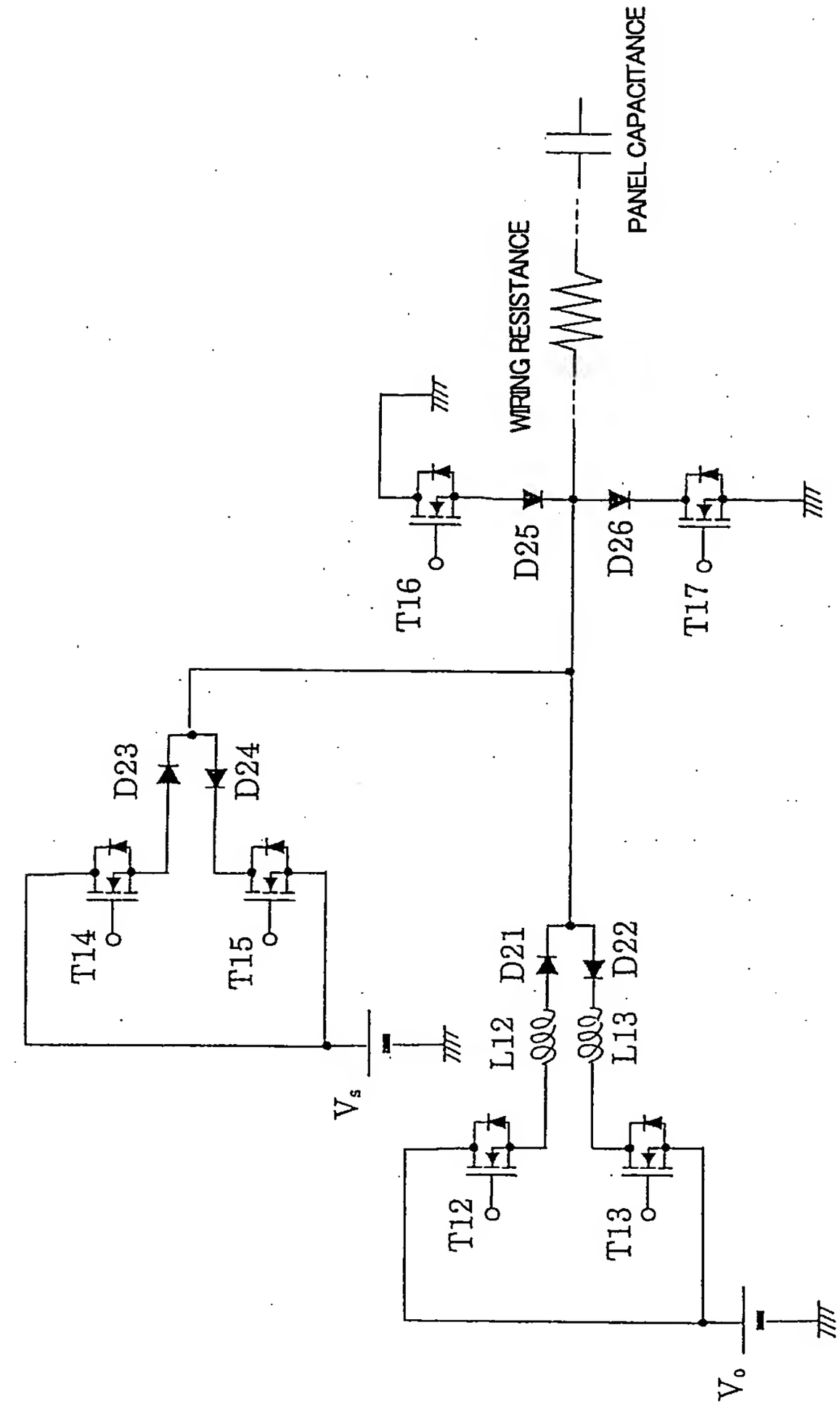

WIRING RESISTANCE
PANEL CAPACITANCE
T16
D25
D26
T17
D23
D24
T14
T15
L12
D21
L13
D22
T12
T13
Vs
Vo

FIG.14

FIG.15

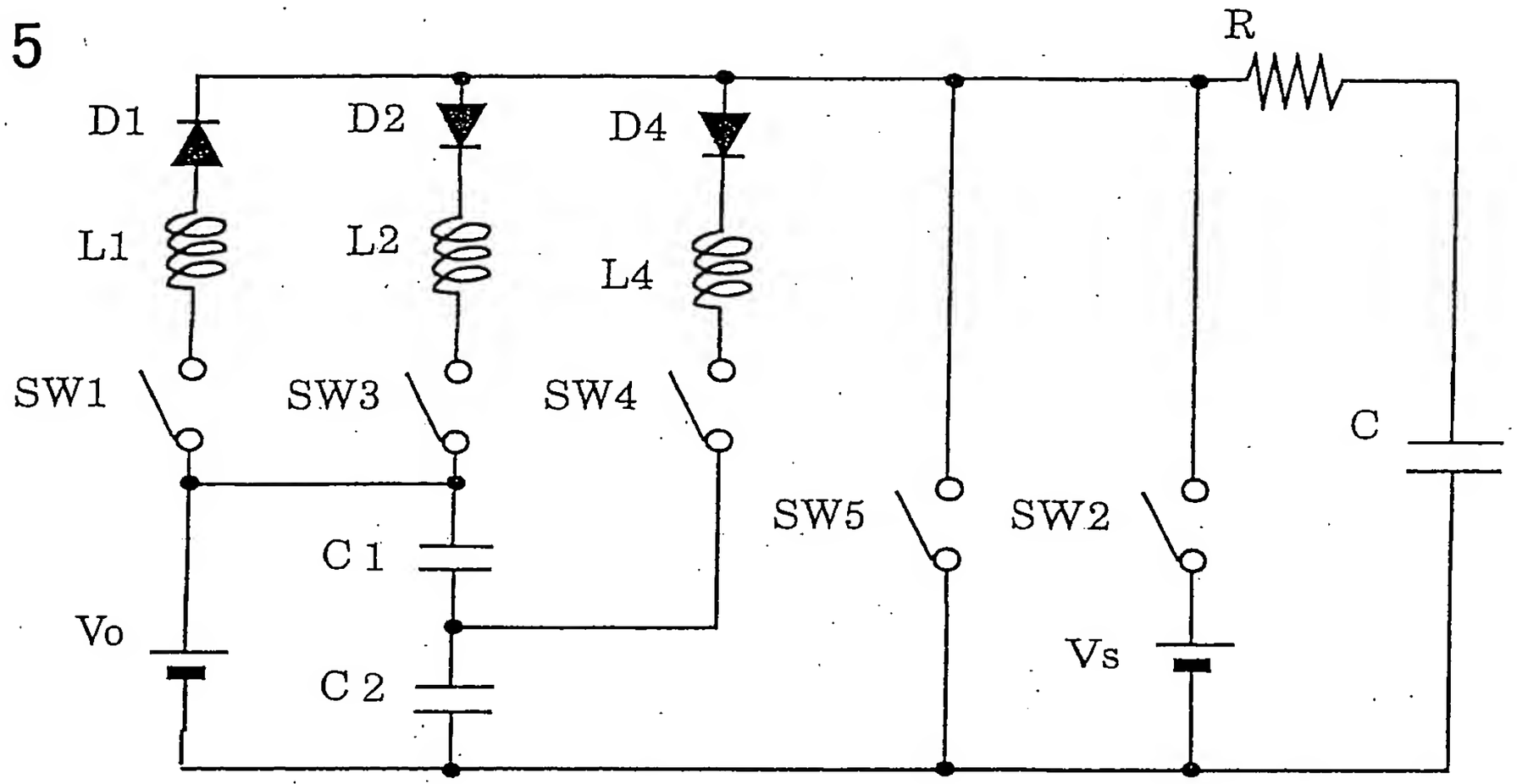
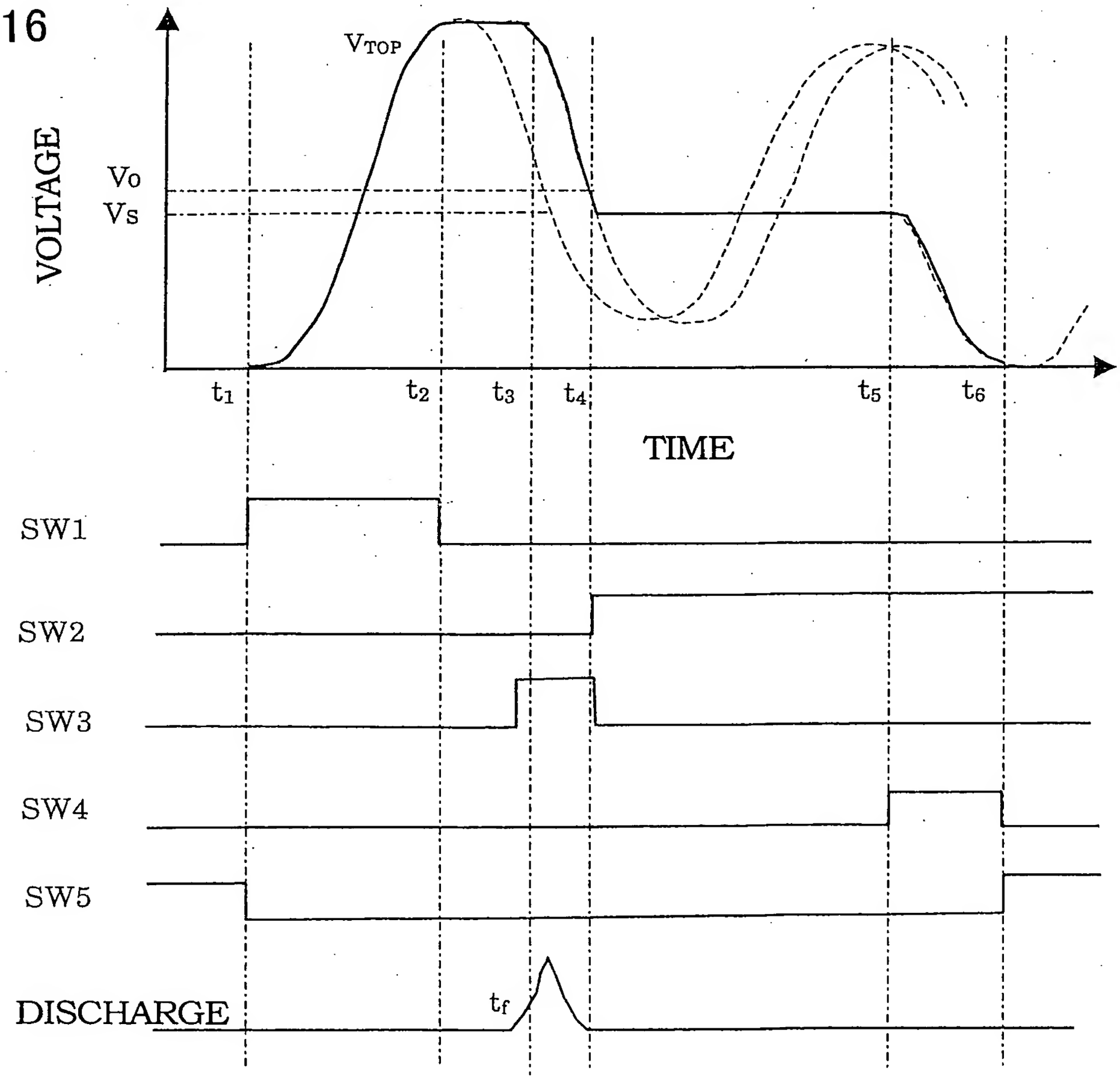

R
D1
D2
D4
L1
L2
L4
SW1
SW3
SW4
C
SW5
SW2
C 1
Vo
Vs
C 2

FIG.16


VTOP
VOLTAGE
Vo
Vs
t1
t2
t3
t4
t5
t6
TIME
SW1
SW2
SW3
SW4
SW5
DISCHARGE
tf

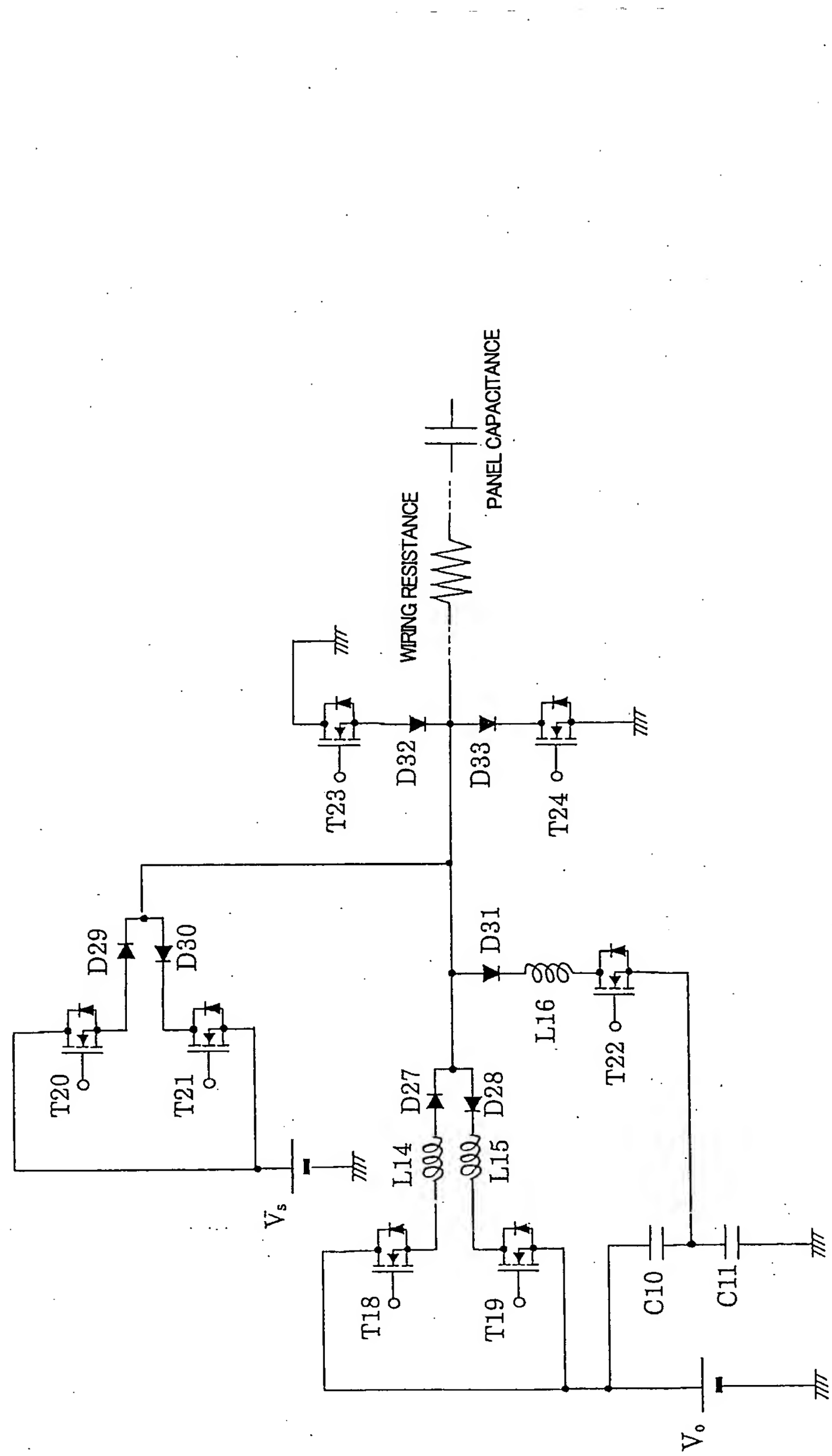

WIRING RESISTANCE
PANEL CAPACITANCE
T23
D32
D33
T24
T20
D29
D30
T21
D31
L16
T22
V_s
L14
D27
D28
L15
T18
T19
C10
C11
V_o

FIG.17

FIG.18

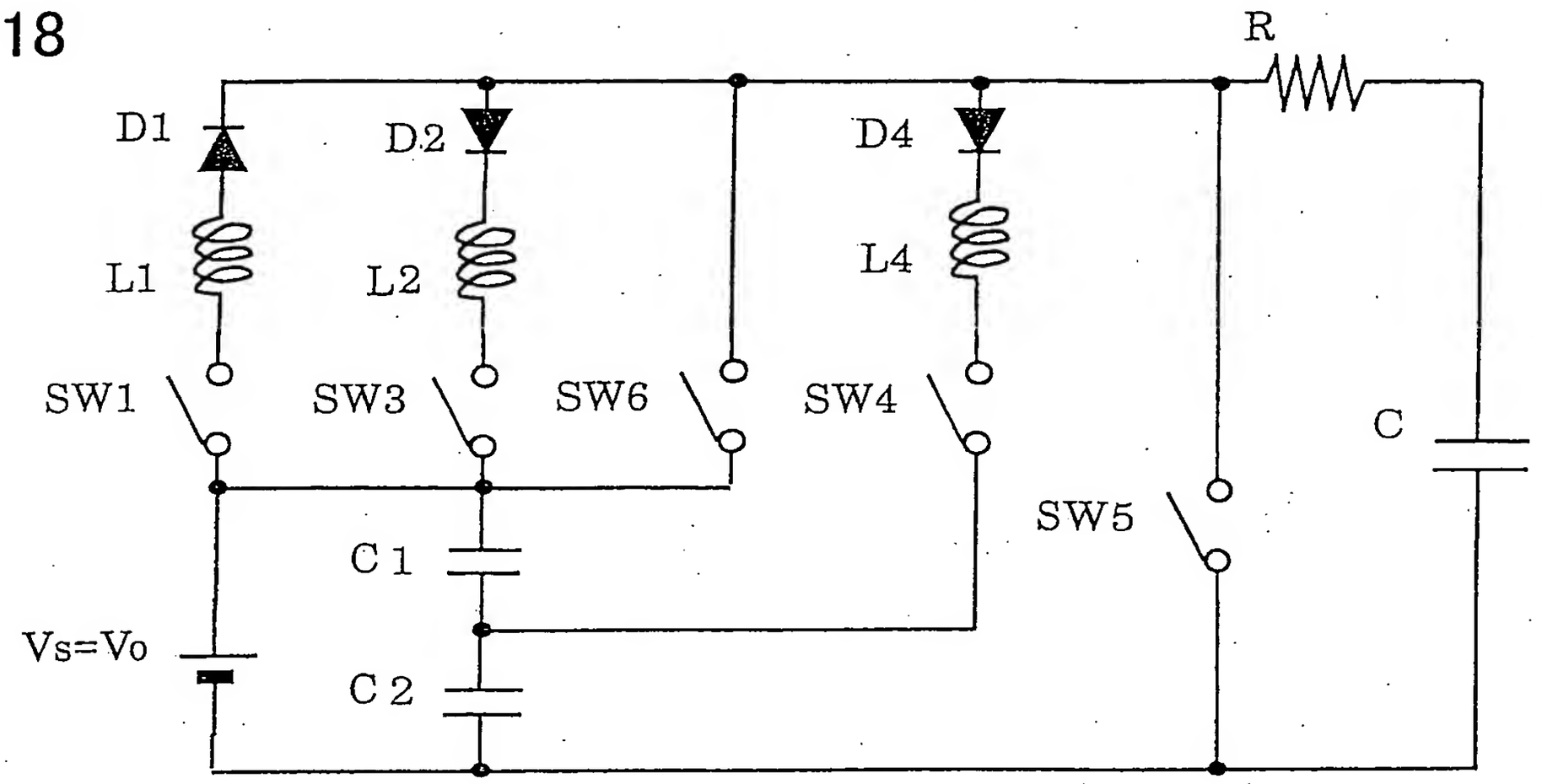
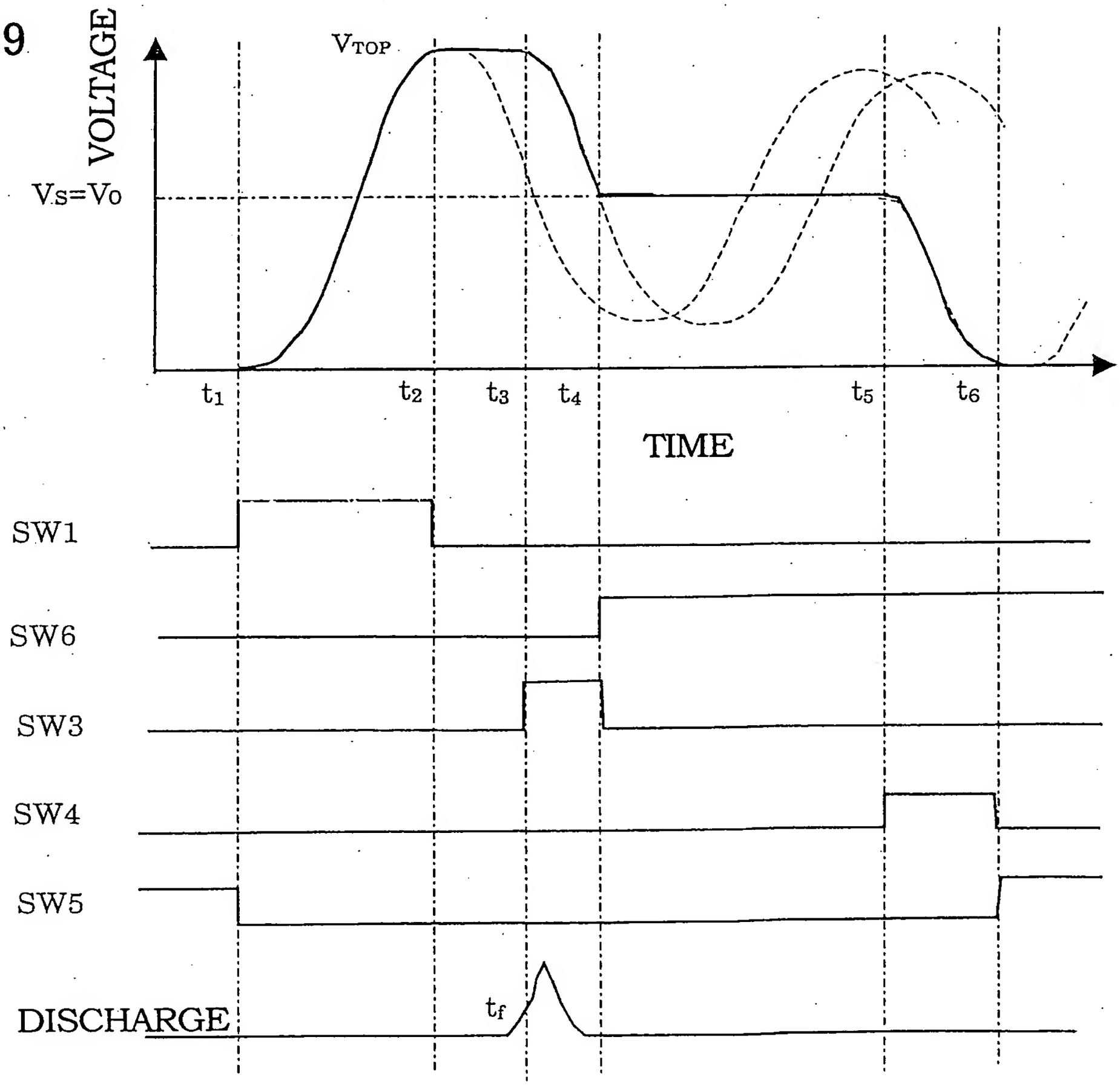

R
D1
D2
D4
L1
L2
L4
SW1
SW3
SW6
SW4
C
SW5
C 1
Vs=Vo
C 2

FIG.19


VOLTAGE
VTOP
Vs=Vo
t1
t2
t3
t4
t5
t6
TIME
SW1
SW6
SW3
SW4
SW5
DISCHARGE
tf

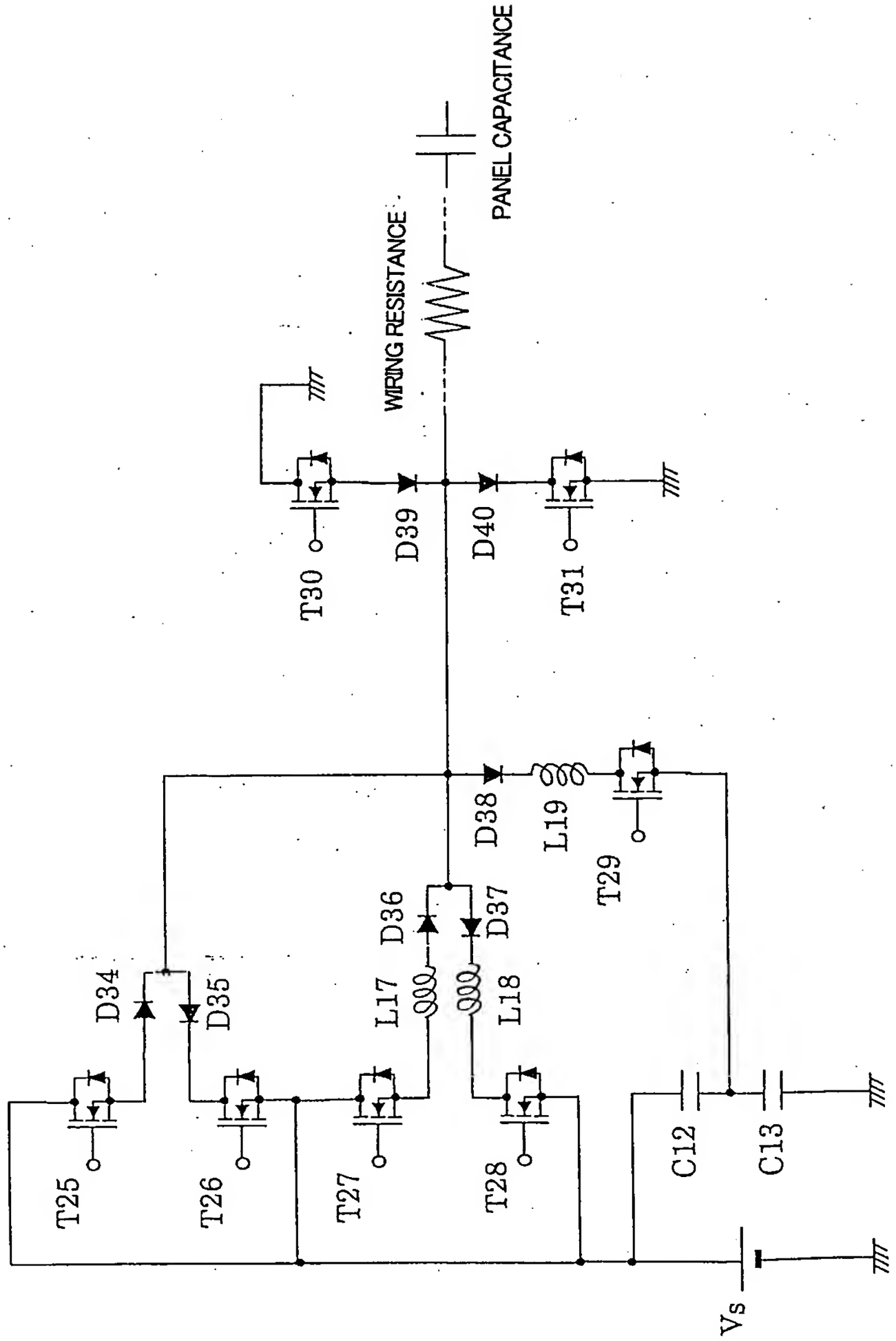

PANEL CAPACITANCE
WIRING RESISTANCE
T30
D39
D40
T31
D38
L19
T29
D36
D37
L17
L18
D34
D35
T25
T26
T27
T28
C12
C13
Vs

FIG.20

FIG.21

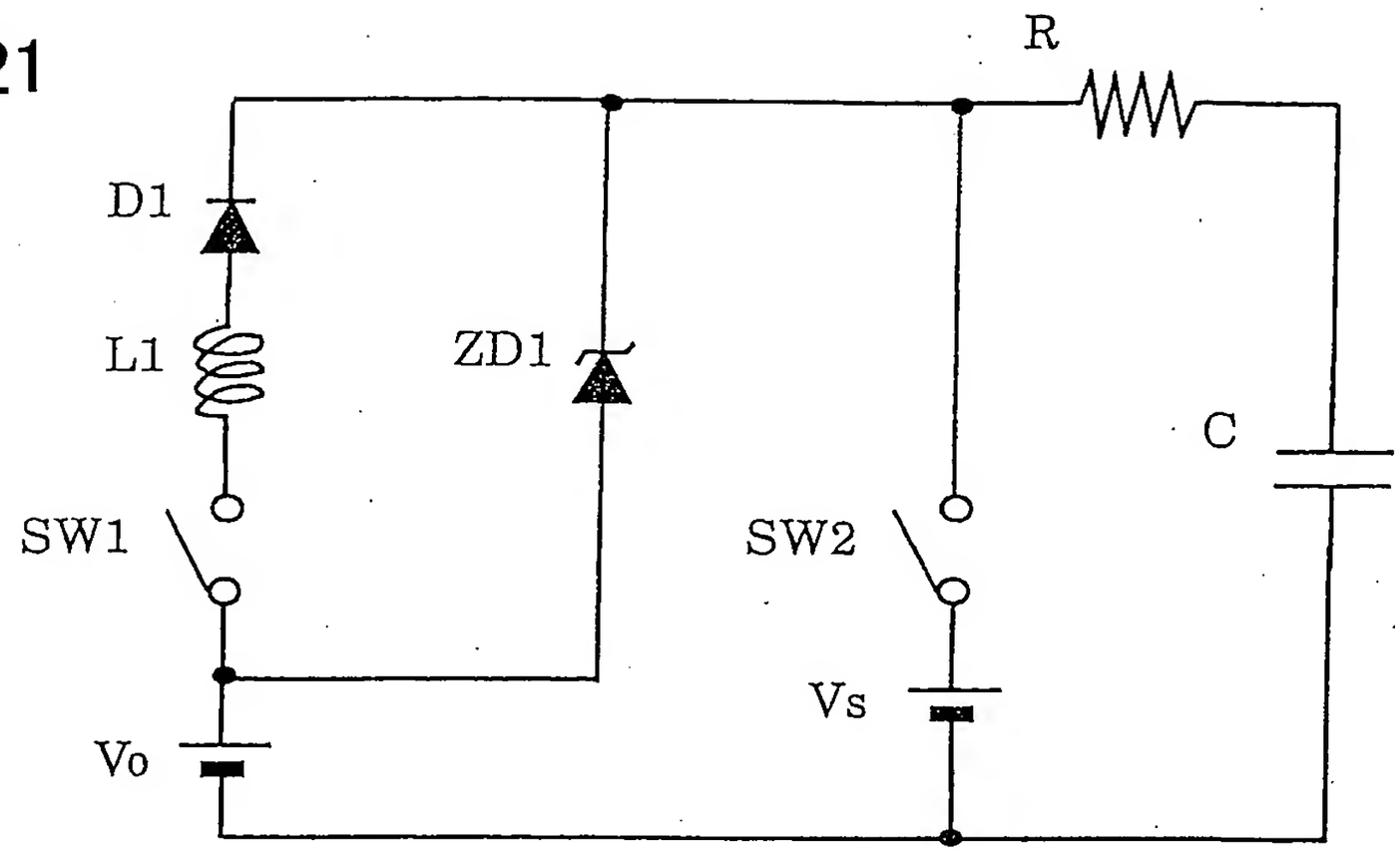
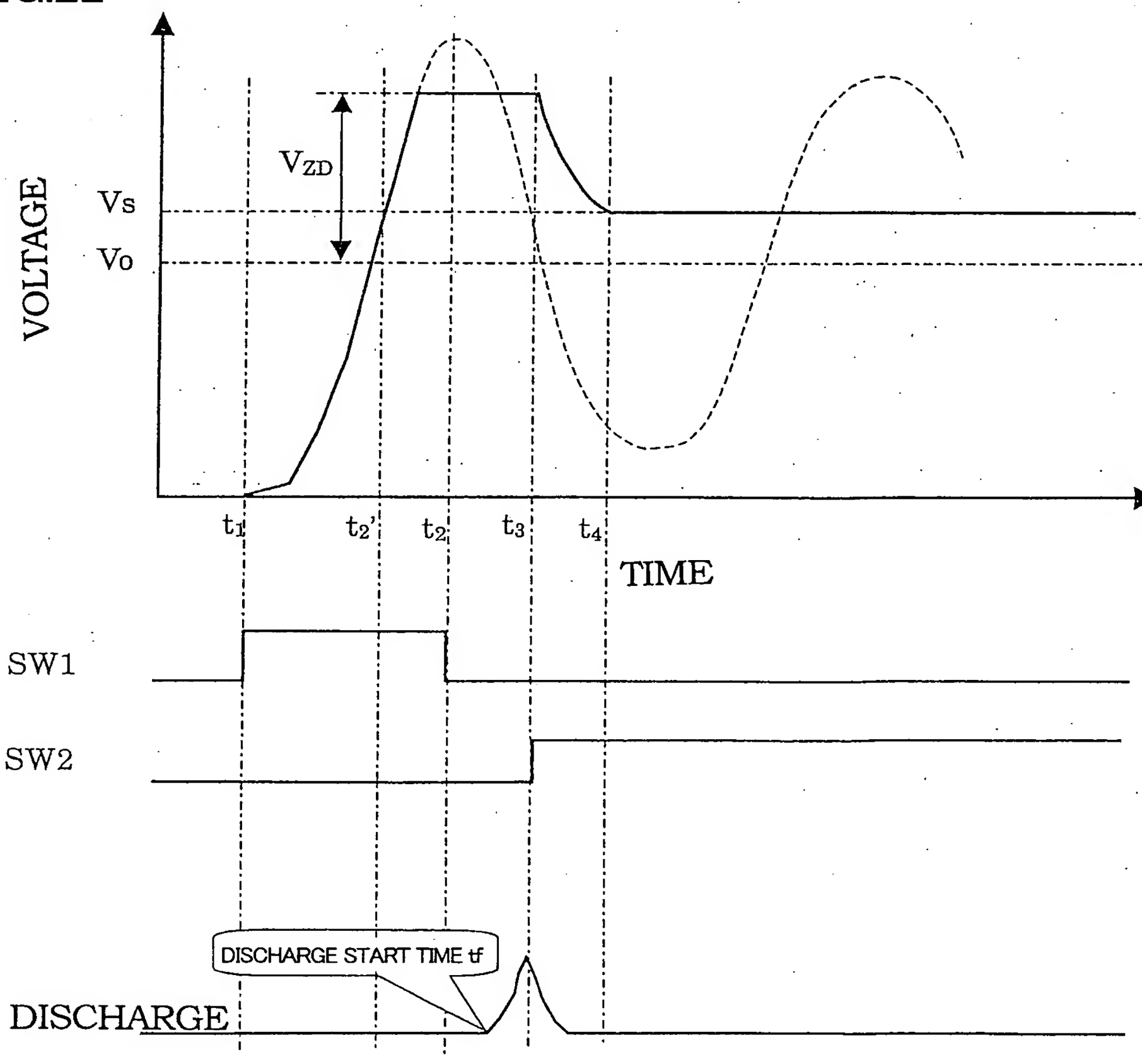

R
D1
L1
ZD1
C
SW1
SW2
Vs
Vo

FIG.22


VOLTAGE
V_{ZD}
Vs
Vo
t_1
t_2'
t_2
t_3
t_4
TIME
SW1
SW2
DISCHARGE START TIME tf
DISCHARGE

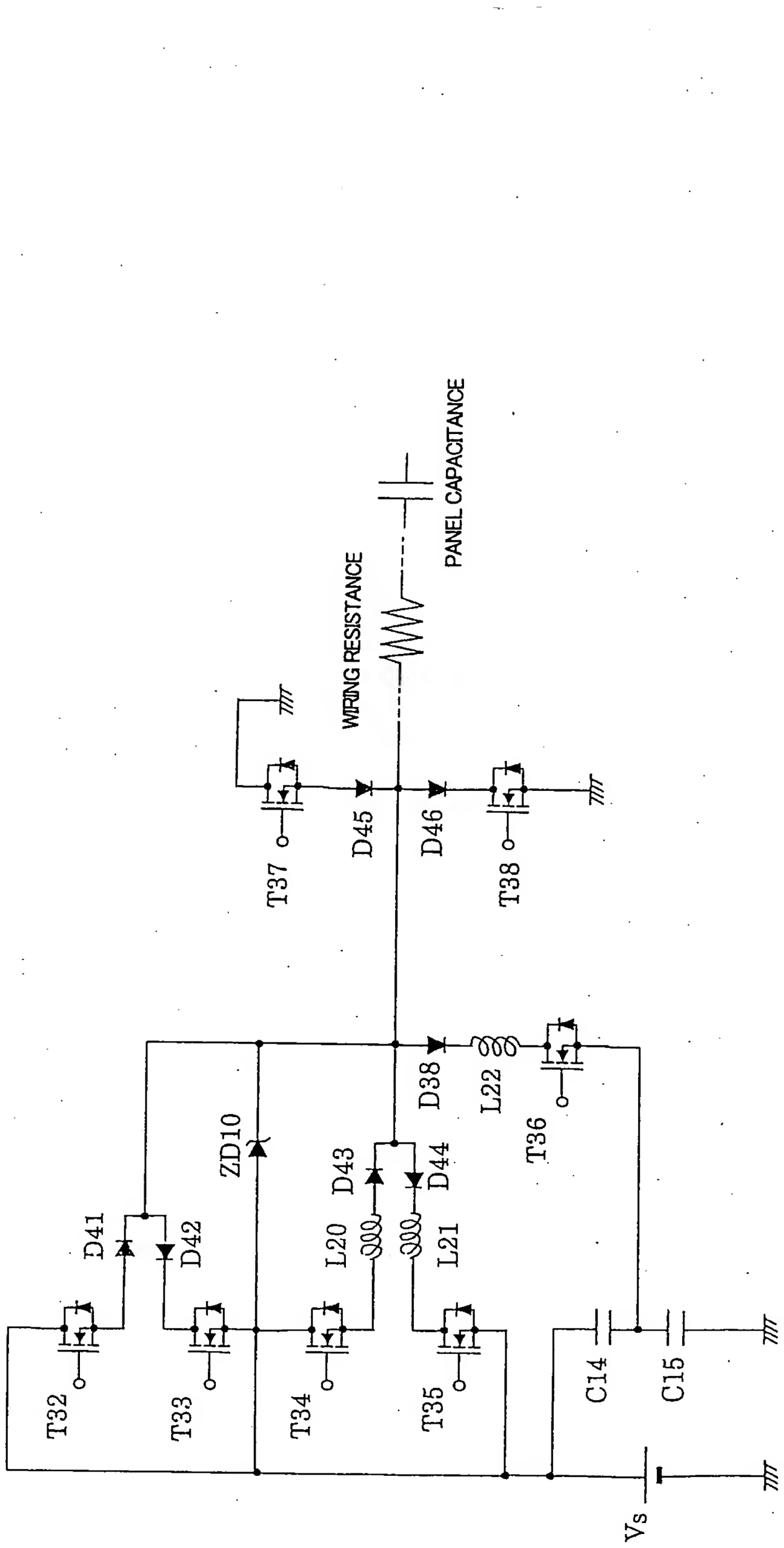

WIRING RESISTANCE
PANEL CAPACITANCE
T37
D45
D46
T38
D38
L22
T36
ZD10
D43
D44
D41
D42
L20
L21
T32
T33
T34
T35
C14
C15
Vs

FIG.23

FIG.24

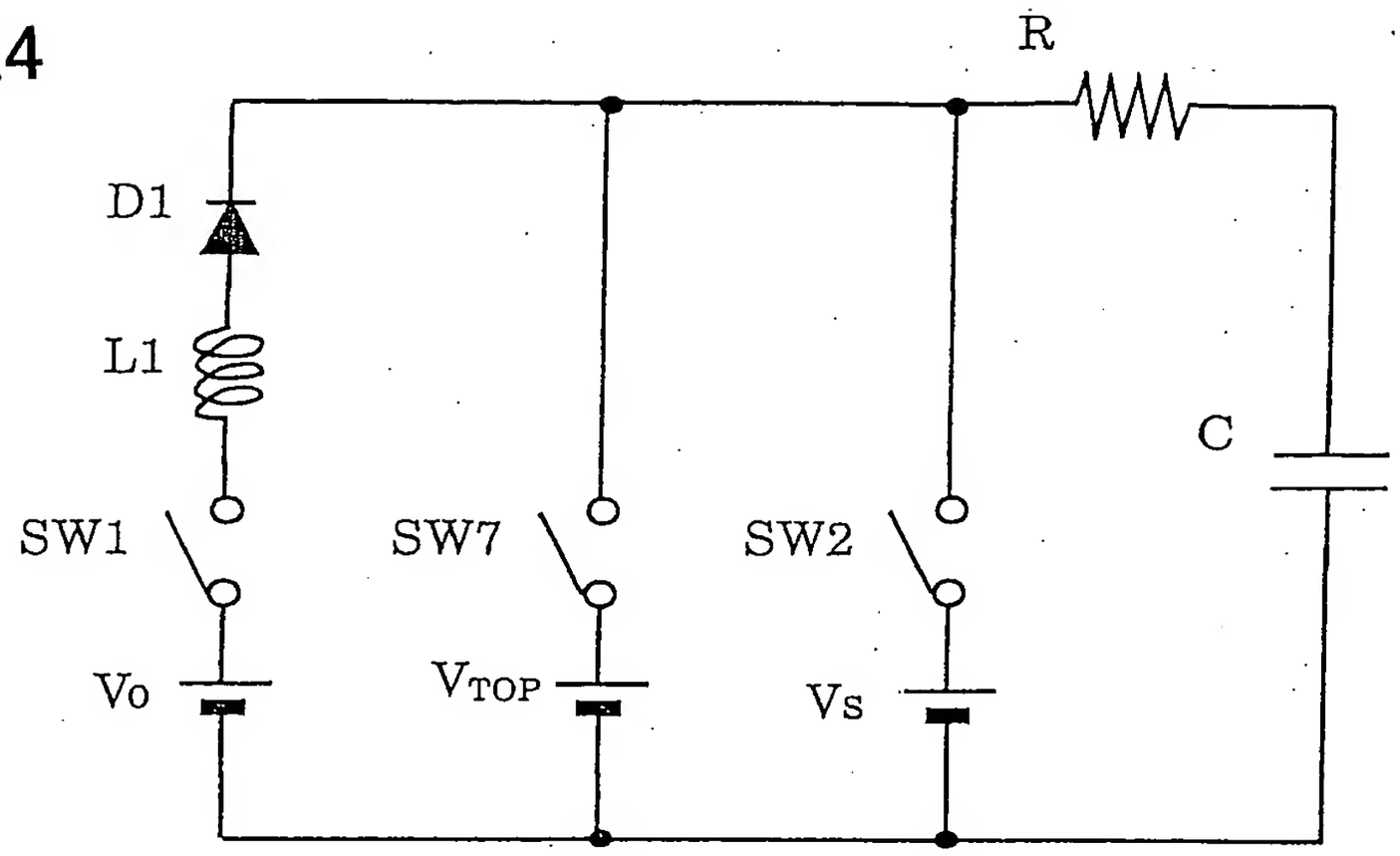

R
D1
L1
C
SW1
SW7
SW2
Vo
VTOP
Vs

FIG.25

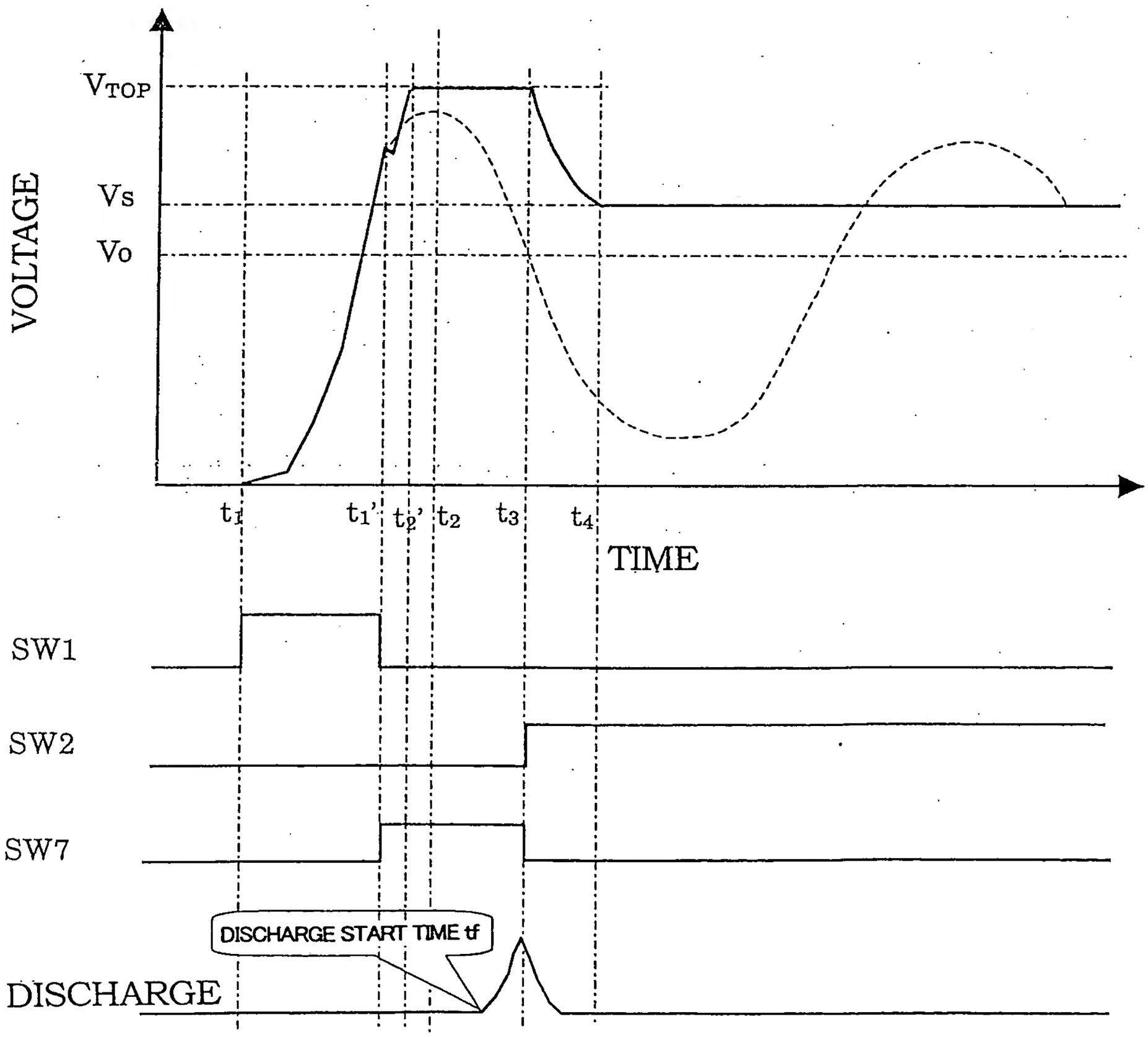

VTOP
Vs
Vo
VOLTAGE
t1
t1'
t2'
t2
t3
t4
TIME
SW1
SW2
SW7
DISCHARGE START TIME tf
DISCHARGE

FIG.26

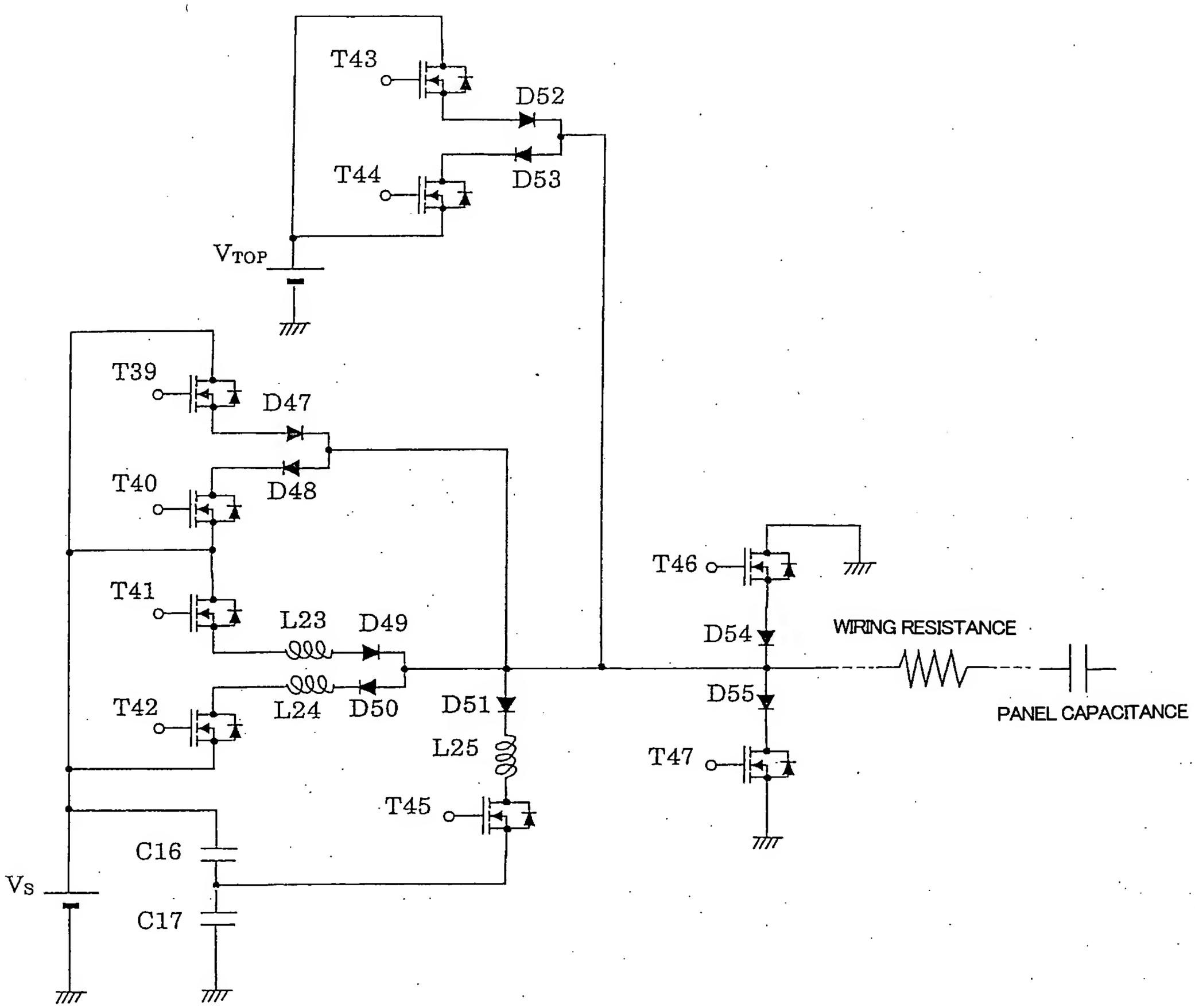

T43
D52
T44
D53
VTOP
T39
D47
D48
T40
T41
L23
D49
L24
D50
T42
D51
L25
T45
C16
C17
Vs
T46
D54
D55
T47
WIRING RESISTANCE
PANEL CAPACITANCE

FIG.27

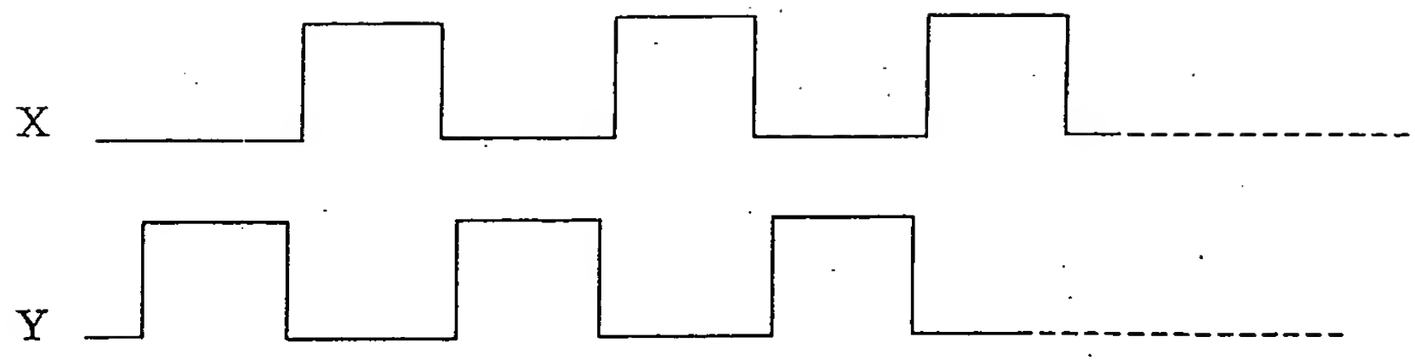


FIG.28

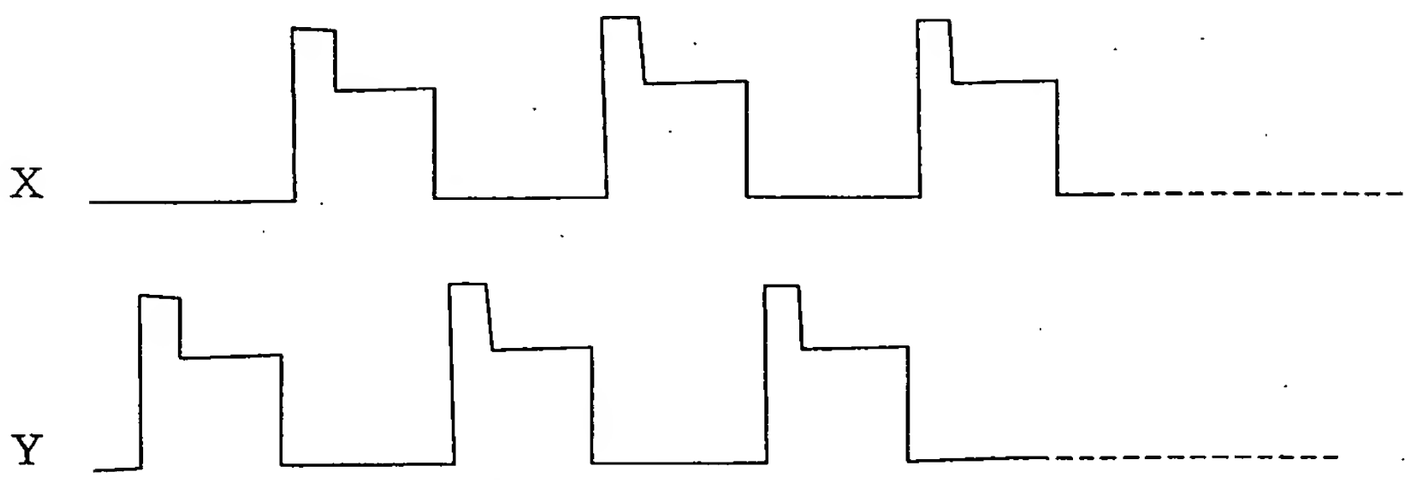


FIG.29

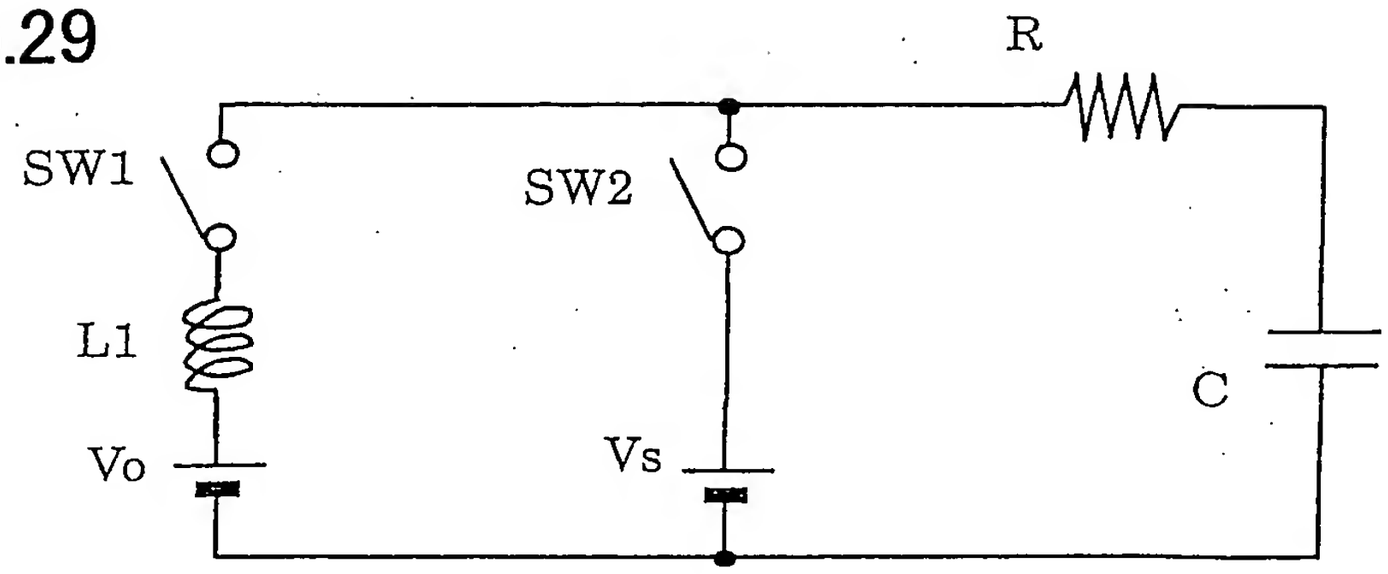

R
SW1
SW2
L1
C
Vo
Vs

FIG.30

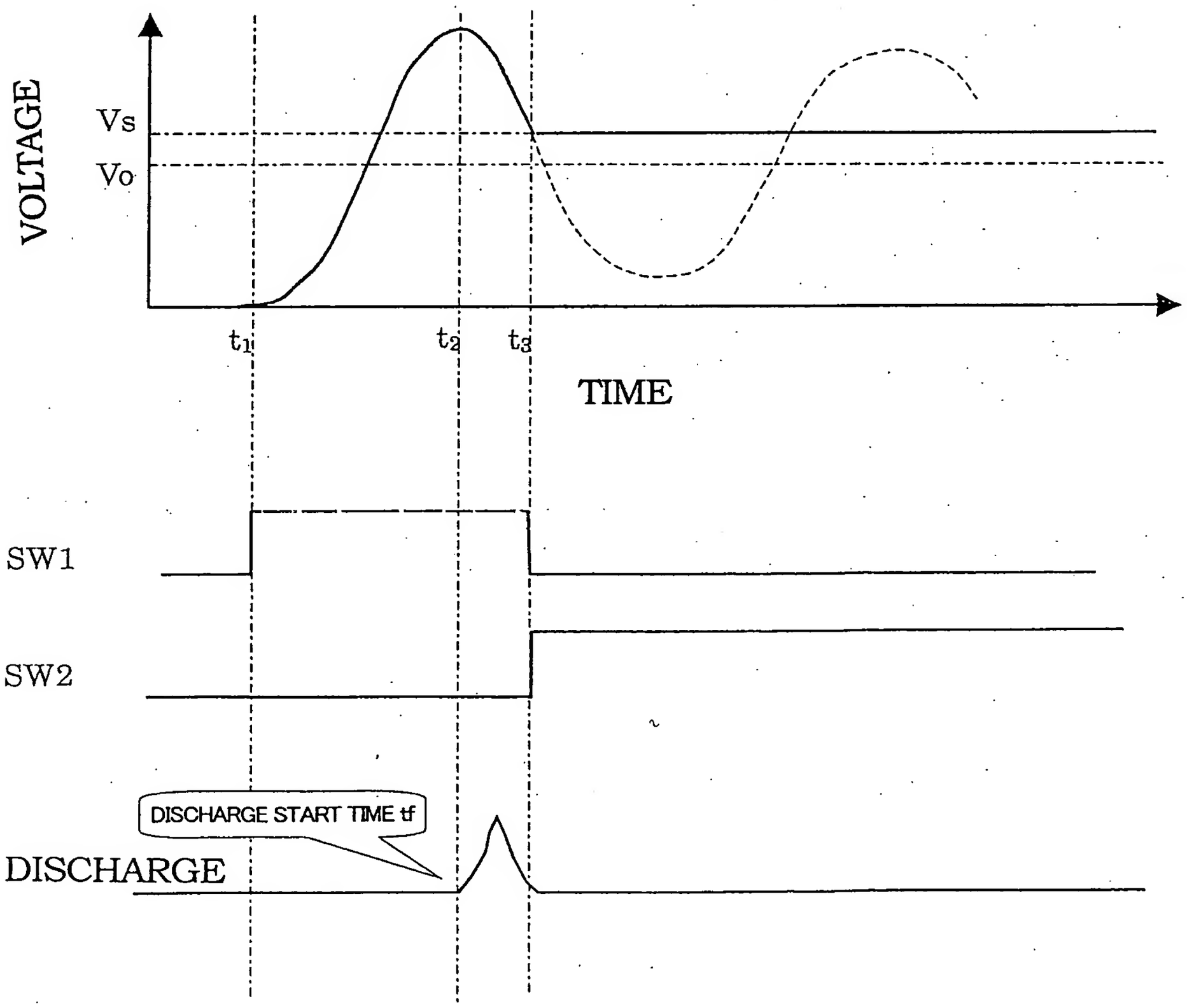

VOLTAGE
Vs
Vo
t1
t2
t3
TIME
SW1
SW2
DISCHARGE START TIME tf
DISCHARGE

FIG.31

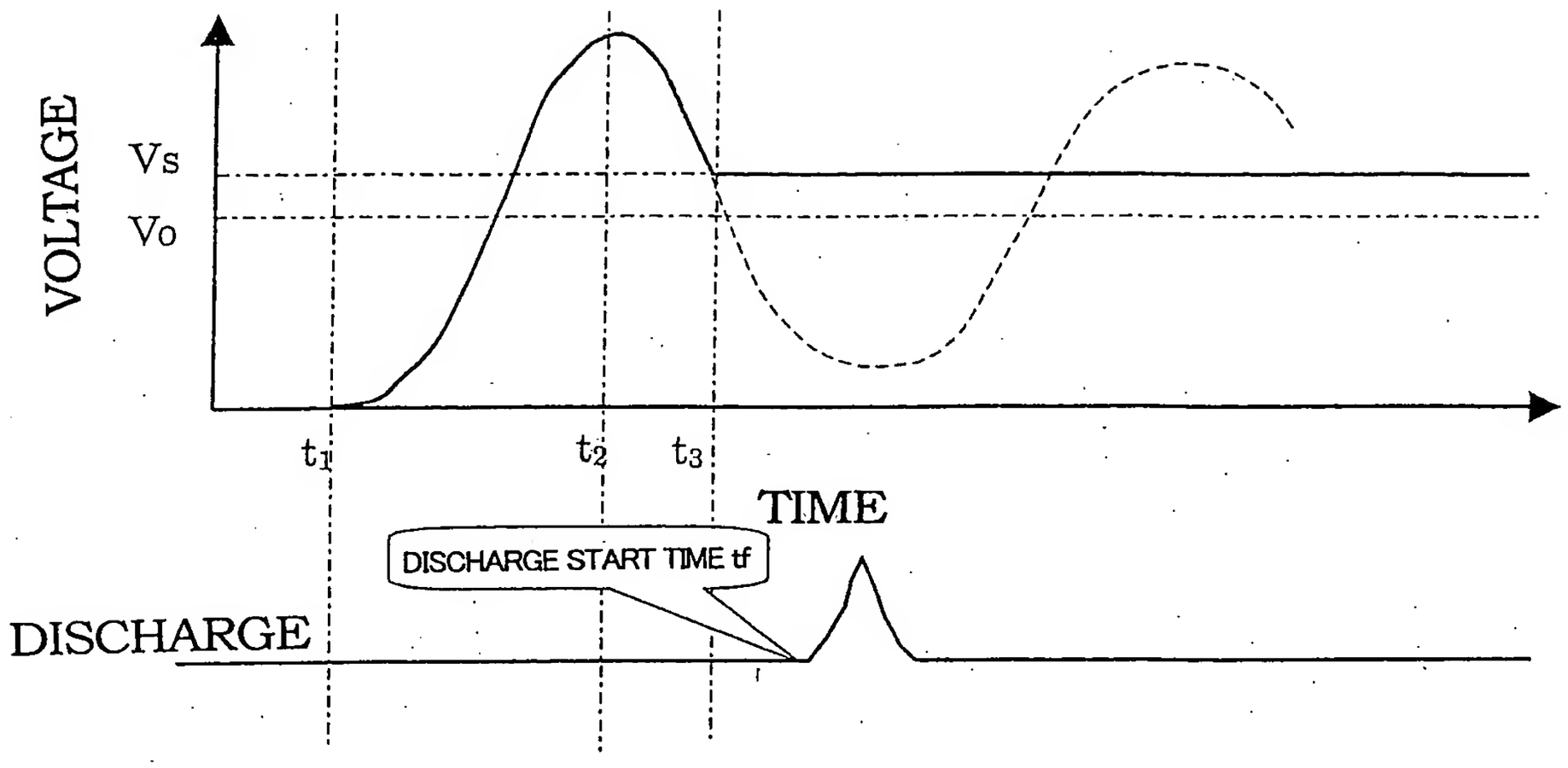
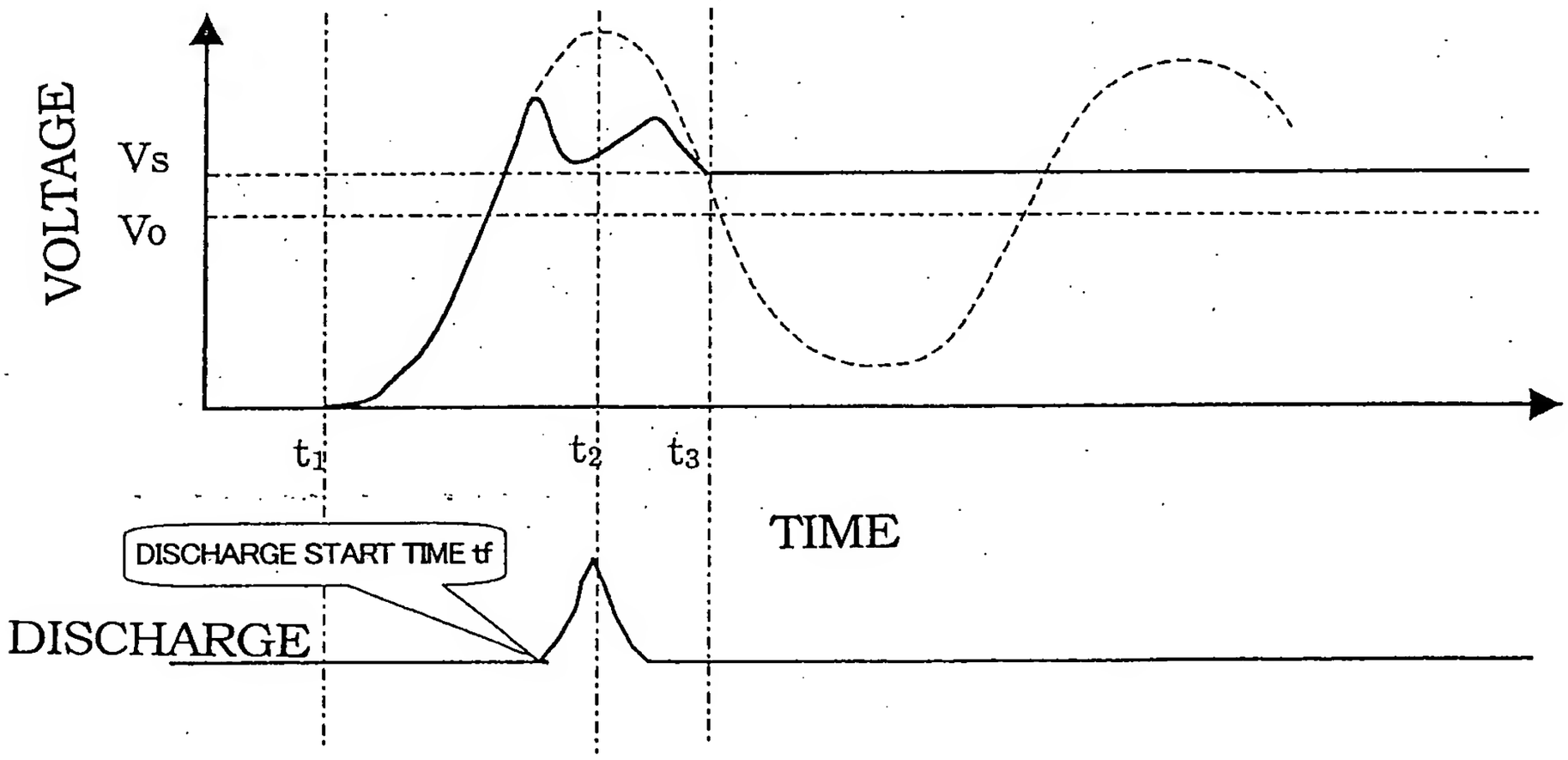

VOLTAGE
Vs
Vo
t1
t2
t3
TIME
DISCHARGE START TIME tf
DISCHARGE

FIG.32


VOLTAGE
Vs
Vo
t1
t2
t3
TIME
DISCHARGE START TIME tf
DISCHARGE